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JPRS Report

Proliferation Issues

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PROLIFERATION ISSUES

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[This report contains foreign media information on issues related to worldwide proliferation and transfer activities in nuclear, chemical, and biological weapons, including delivery systems and the transfer of weapons-relevant technologies.]

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JAPAN

Mishap Detector To Be Installed on Russian Reactor

*OW2711131792 Tokyo KYODO in English
1222 GMT 27 Nov 92*

[Text] Tokyo, Nov. 27 KYODO—Japan agreed Friday to install a device to detect nuclear accidents on a Russian reactor to deter recurrence of a mishap similar to the Chernobyl nuclear disaster, Japanese officials said.

The agreement came at a meeting in Tokyo of officials from the Japanese Science and Technology Agency and the Russian Ministry of Atomic Energy, agency officials said.

Officials from the two sides picked as a candidate for the installation the No. 2 reactor at a nuclear power plant in the former Leningrad, renamed St. Petersburg after the breakup of the Soviet Union, they said.

The million-kilowatt nuclear reactor has the same outdated design as the Chernobyl reactor that released huge amounts of radioactive waste into the atmosphere in a 1986 mishap.

Both reactors use graphite in control rods to adjust the speed of nuclear fission activity.

The Science and Technology Agency plans to dispatch Japanese experts to examine the St. Petersburg power plant next year to determine where the detector is to be installed on the reactor, they said.

The device issues an early warning to reactor operators when abnormalities occur inside the reactor, by detecting the sound of leaking water when leakage takes place.

Nuclear reactors use water as a coolant to slow down the nuclear fission reaction.

When cooling water leaks from a reactor, the core of the reactor can melt down in the worst case due to the heat created by the nuclear fission.

Government Welcomes Moscow S&T Center

*OW2711132592 Tokyo KYODO in English
1201 GMT 27 Nov 92*

[Text] Tokyo, Nov. 27 KYODO—Japan welcomes the establishment of the International Science and Technology Center in Moscow aimed at occupying the talents of former Soviet nuclear scientists and other experts on weapons of mass destruction, the Foreign Ministry said in a statement issued Friday.

The statement, issued in the name of Foreign Minister Michio Watanabe, said Japan will recommend a Japanese Government official, Atsushi Shaku, as a candidate for director general of the center. Shaku now serves as a special assistant to the Science and Technology Agency.

Japan has decided to appoint Takaya Suto, the Foreign Ministry's top official in charge of scientific and technological affairs, as Japan's representative to the governing board of the center, it said.

The center was formally established earlier in the day in a signing ceremony in the Russian capital, which was participated in by representatives of Japan, the United States, the European Community and Russia.

The statement said Japan has strongly supported the idea of encouraging former Soviet scientists and engineers involved with nuclear weapons and other weapons of mass destruction to stay in the country.

It noted that Japan has pledged 20 million dollars toward the center, while promising to actively assist the center's activities.

INDONESIA

Government Monitors Japanese Plutonium Ship

*BK2511102592 Jakarta ANTARA in English
0913 GMT 25 Nov 92*

[Text] Surabaya, Nov. 25 (OANA/ANTARA)—Fleet Commander for the eastern region Rear Admiral Tanto Kuswanto said here on Wednesday that his fleet has prepared no special operational activities to prevent the possibility of the Japanese ship Akatsuki Maru, which is carrying a load of plutonium, from taking an alternative route through the Lombok Straits.

Our operational system is integrated and coordinated with the other branches of the Indonesian Armed Forces (ABRI) and we are constantly monitoring possible infringement of our marine territory. Routine activities may be enough to ward off the Akatsuki Maru, he said.

Routine activities involve constant continuous observation of shipping traffic within Indonesia's exclusive economic zone, he explained. These activities are part of the Indonesian Navy's efforts to safeguard the country and prevent possible threats and disturbances from enemies, he said.

Indonesia is an archipelagic country with many areas which may be unlawfully penetrated by foreign ships, he said adding that sea patrols are conducted to prevent this possibility.

The Indonesian Navy is monitoring the route of the Japanese plutonium ship, but it needs positive data before taking any action, he said.

The reliability of the Indonesian Navy has been well tested, he said referring to the incident when the navy successfully chased away the Portuguese ship Lusitania Expresso.

YUGOSLAVIA

Commentary on Proliferation of Nuclear Weapons

*AU0911171992 Belgrade POLITIKA in Serbo-Croatian
3 Nov 92 p 4*

[Commentary by Miroslav Lazanski: "Atomic Bombs Travel to Balkans"]

[Text] The Munich police have announced that they have intercepted a chain of smugglers suspected of trying to get large quantities of uranium into the war zones of the former Yugoslavia.

Munich Public Prosecutor (?Heinz Stoker) has said that 20 people are under investigation, some of them already arrested. According to the prosecutor, some documents have been seized, together with more evidence to the effect that this was an attempt to smuggle highly radioactive uranium 235, but the uranium itself has not been found.

This news from Munich can be linked to speculation about the disappearance of a number of Soviet nuclear warheads from the arsenal of the former Soviet Army, and the uncertainty concerning the amount circulating on the black market of atomic weaponry. Modern atomic bombs come in various "packages," from nuclear mines and shells that can be carried by individual soldiers, to warheads attached to missiles. The problem of the proliferation of nuclear technology and atomic weapons is emerging as the major problem in relations between the United States and the republics of the former Soviet Union.

Nuclear terrorists

The existence of miniature atomic bombs that can be carried by individual soldiers was confirmed several years ago by William Arkin, an American scientist from the Institute for Political Studies in Washington. Actually, ever since the first heavy and awkward atomic bomb was dropped on Hiroshima, up to the modern "little bombs," the main trend in development has been geared to reducing the size and the weight of this atomic means of destruction. Not long ago, heavy aircraft were hardly able to carry one atomic or hydrogen bomb each; now the equivalent destructive power is carried by members of special commando units in their kitbags. The trend is to reduce the size of modern weaponry, and it is this that increases the possibility of atomic terrorism.

Arsenals of mini atomic weapons include nuclear mines with a payload of up to 0.1 kiloton, weighing about 27 kilograms. There are two types: the SM-50 and the D-444. Little is known about these nuclear mines, but the fact is that the U.S. Armed Forces have developed a whole family of atomic mines ranging from 0.1 up to five kilotons, that is, weighing 27, 45.3, and as much as 226.8 kilograms.

Recently, U.S. land forces have been even more demanding and attentive to detail: the size of the mine has to be minimized, while the weight cannot exceed 100 kilograms. The mine has to be firm and hermetically sealed, simple to store, and with the facility to be activated by remote control using wire, radio signals or a clock. It has to be laid manually, or by mechanical means. The installation time must not exceed 10 minutes, including a complete check that the equipment will receive the activating signal.

These are only a few standards for nuclear mines of small dimensions. The surface detonation of a 10-kiloton nuclear mine would create a crater 90 meters wide and 20 meters deep. The 0.1 to five-kiloton nuclear mines are very effective against tanks within a radius of 50 to 500 meters, and against armored transporters within a radius of 60 to 600 meters, all of which depends, of course, on the type of surface.

Special forces armed with small nuclear mines and bombs are well-suited to war in urban Europe: sudden attacks on the enemy's communications, preventing its movement in the desired direction, destroying its military transport....

No control

If the world is facing the possibility of the illegal resale of miniature atomic mines and bombs, there is an even greater danger still from the proliferation of uranium 235, the vital fission material that is necessary for creating the chain reaction in a nuclear bomb. The greatest obstacle to the proliferation of nuclear weapons is the fact that the natural element of uranium contains only 0.7 percent of the 235 uranium isotope, however, and that it has to be enriched to 90 percent before it can be used for nuclear warheads. This procedure is expensive and complicated, despite the advance technological advances in this field. There are some more modest methods for the enriching of uranium 235, such as the method of gas centrifuge. As for plutonium 239, it does not exist in nature, but its supplies in the world have been increasing rapidly. It is an artificial by-product of the fission created in nuclear power generators. After processing, it is possible to use plutonium 239 as an atomic explosive. That greatly concerns the experts, as there is more and more plutonium 239 around.

In addition, the great quantities of fission material not only favor the extension of the "nuclear club" membership, but also present a real challenge from various terrorist and extremist groups. The nuclear non-proliferation treaty has not been signed by every country, and some are already working intensively on their own nuclear programs.

There is no absolute control. It is impossible to control all the routes through which plutonium goes. For that reason, the Federal Republic of Yugoslavia will have to keep an eye on the possibility of some of its neighbors becoming new members of the "nuclear club."

BRAZIL

Computer Thefts Said To Expose Nuclear Secrets

Espionage Theories

93SM0072A Sao Paulo ISTOE SENHOR in Portuguese
11 Nov 92 pp 28-30

[Article by Mario Chimanovitch]

[Text] After having been treated as a national security matter by all of Brazil's recent governments, the country's nuclear energy secrets may at this very moment be being manipulated by native laymen, or even by scientists working for some foreign power. Although they may seem to have been borrowed from a novel by John Le Carre or Ian Fleming, masters of international spy literature, such theories cannot be dismissed now that thieves have gained entrance to a building occupied by the National Nuclear Energy Commission (CNEN) at Rua General Severiano 90, in the Botafogo neighborhood of Rio de Janeiro's southern zone. The incident occurred on the evening of 17 March of last year, but is only now being revealed—by ISTOE in this exclusive story. On that occasion, the invaders stole a microcomputer whose memory contained what professionals in the nuclear energy business call "the national atomic inventory." This is a detailed list of the stocks of strategic radioactive materials on hand in Brazil, such as uranium and plutonium, which can be used either to generate electricity at power plants, or to make bombs.

Besides making off with the computer, a Microtec MF 88, the bandits opened the safe used by the board of directors of Radio Protection, Nuclear Safety, and Safeguards and took a diskette containing secrets about the projects carried out by Brazilian authorities to exploit radioactive materials. According to Federal Police records, the thieves took the trouble to remove five other items: a photographic flash attachment, a slide projector, a pair of binoculars, a monocle, and a typewriter. Policemen assigned to investigate the case believe the group deliberately wanted to make the operation look like a simple robbery, a common occurrence in government offices.

The theft of the computer and the diskette were kept secret from the outset because matters the military considers of strategic importance were involved. Furthermore, Brazil had been negotiating with Argentina concerning the accession of both countries to the International Atomic Energy Agency (IAEA), which would put all the nuclear activities of the two countries under that agency's control. Finally consummated on 13 December 1991, the accord made disclosure of the incident even more awkward, since it raised doubts about Brazil's ability to handle such sensitive issues. ISTOE obtained, on an exclusive basis, a copy of an official communication sent confidentially by scientist Anselmo Paschoa—then director of Radio Protection, Nuclear Safety, and Safeguards—to Rio de Janeiro Federal Police Superintendent Edison de Oliveira. Sent four

days after the theft, the document bears the number 040/91 and emphasizes in the very first paragraph that the data kept in the microcomputer's memory are "of great relevance to the country's safeguards system."

Strangely, given the nature of the case, the Federal Police have been treating it like an ordinary robbery. The investigation ended up in the Rio Federal Police's Treasury Police Bureau, which has few leads on the identity of the thieves and is investigating another, equally intriguing, incident: the theft of two microcomputers from the Nuclear Engineering Institute (IEN) at the Federal University of Rio de Janeiro, which occurred on 23 October 1991. In an action that bears some similarity to scenes made popular by the 007 films, men armed with machine guns subdued the guards at the IEN building on the Ilha do Fundao campus in Rio's northern zone and took two Casio microcomputers on which secret data on atomic research had probably been stored.

The superintendent of the Federal Police in Rio believes the computer thefts at the CNEN and the IEN may be related. "They look like classic espionage cases involving theft of important secrets," said Oliveira, who promises that he will personally interview CNEN Chairman Jose Luiz de Santana Carvalho. Accustomed to discharging duties that seem to have been at least remotely inspired by the adventures of special agents created by literature and the movies, staffers at the Strategic Affairs Secretariat (SAE), the agency that replaced the notorious National Intelligence Service (SNI), say that certain countries have always had an interest in obtaining secret data on Brazilian atomic energy programs.

Said to be among the nations that are so curious are the United States and Israel. "The Americans [would be] motivated by commercial resentment since Brazil is a serious candidate for admission to the exclusive club of international suppliers of components for nuclear systems," argued one of the detectives who works for the SAE. "The Israelis, in turn, do not look kindly on our closer commercial ties with the Arab nations." Our source notes that Brazil was engaged in mysterious deals with Saddam Hussayn's bellicose Iraq, to which it secretly sold, early in the 1980's, tens of tons of yellow cake, a yellow paste of concentrated uranium that is practically free of impurities. When called to account by the press, the Brazilian government alleged that the material was to be used for processing phosphate at a Belgian-built plant at Alaqin, an Iraqi city on the Turkish border. However, there were lingering suspicions that the actual purposes were less pacific.

Convinced that Brazil has been the target of activities—as intense as they are discreet—perpetrated by foreign "spooks" [arapongas], professionals in Brazilian intelligence services insist they are keeping an watchful eye mainly on American agents. That directed interest is a result of the suspicion that the CIA, the U.S. Central Intelligence Agency, might be involved in the theft of the

microcomputer from CNEN. To add yet another element of international intrigue to the story, this suspicion is said to be behind a theft of U.S. diplomatic pouches that were dispatched from Rio de Janeiro last year. If the conjecture is true, a group of Brazilian James Bonds may have intercepted the pouches in the hope of finding confidential information on the Brazilian nuclear program in them.

The CNEN chairman confirms that Brazil would be able to enter the international atomic market on a "highly competitive basis," but believes foreign spies were not the ones responsible for the theft of the office computer and suggested another, similarly surprising, scenario for the episode. "I blame the operation on Brazilian ultranationalist groups comprised of civilian and military elements who oppose the dismantling of the so-called parallel nuclear program," said Carvalho, in a reference to the dream that began during the "uniformed" regime and was aimed at giving the country the recipe for the atomic bomb, a project apparently buried by Fernando Collor (see box).

These ultranationalists, according to the CNEN director, have been rather vehement in expressing their dissatisfaction with the announced winding down of Brazil's nuclear plans. "I have received telephone threats, my apartment in Brasilia has been turned inside out, and I even escaped a gunman in Rio," he asserted. "These are dangerous fanatics." Carvalho also related that on one occasion, enthusiastic advocates of the manufacture of nuclear weapons sabotaged his car by letting the air out of the tires and loosening the steering tie rod.

Now doing research at the Department of Physics of the Pontifical Catholic University (PUC) in Rio, Paschoa gave assurances that the secrets removed from the office of the directors who headed the CNEN are no longer as important as they were in March 1991. "The job was done by people who thought we knew more than we actually did know," hazarded the scientist, an adherent of the theory that the crime was committed by persons interested in putting the negotiations for the agreement signed by Brazil, Argentina, and the IAEA on the skids. Another specialist in nuclear energy, Luiz Pinguelli Rosa, believes there exist other countries eager for information on the movement of strategic nuclear materials in Brazil. He emphasizes, however, that the data stored in the computer would not by itself enable someone to unravel highly complex secrets, and he termed the incident as being "of relative gravity." Former Education Minister Jose Goldemberg, also a nuclear physicist, who was national secretary of science and technology at the time when the computer was stolen but has now rejoined the staff of professors at the University of Sao Paulo, was reluctant to comment on the matter: "Thefts of computers occur in all government offices."

Judging by the absolute paucity of discoveries by police in charge of investigating the incident, one may legitimately conclude that the findings will not lead anywhere. Indeed, efforts to clear up the theft of the computer at

CNEN have virtually been abandoned. At the request of ISTOE, the PF superintendent in Rio ordered his aides to locate the files on the case. After three days, the advisors brought him the documents concerning the theft of the two computers at IEN, but nothing about the first episode. Oliveira apologized and said that the exhibition of the files would have to be postponed. It is hoped that these papers have not also been stolen.

Parallel Program Revival

93SM0072B Sao Paulo ISTOE SENHOR in Portuguese
11 Nov 92 p 30

[Text] Criticized by scientists and defended by the military, the parallel nuclear program has all it needs to recuperate its energy. Begun during the cycle of "uniformed" governments and marked by the covert search for the formula that would enable this country to make its first atomic bomb, work on the project was decelerated during the Fernando Collor administration. Now, with Itamar Franco in power, there are signs that the program may pick up speed and return to its former levels. Hints as to the future of the project may be found in the appointment of one of its leading advocates, former Navy Minister Admiral Mario Cesar Flores, to the post of Secretary of Strategic Affairs. It will be Flores's job to coordinate Brazilian nuclear policy. According to him, the military's role will be to "cooperate" with the CNEN [National Nuclear Energy Commission], a agency connected to the SAE [Strategic Affairs Secretariat], in conducting research projects, which include two plans of questionable utility undertaken with Navy observation and enthusiastically supported behind the scenes by the admiral himself: the building of a nuclear-propelled submarine, and work on uranium enrichment.

Physicist Luiz Pinguelli Rosa, a vociferous opponent of the parallel program who was considered for appointment as President Itamar Franco's ministry of science and technology, regrets that the president has decided to keep the CNEN under the SAE umbrella instead of transferring it to the Cabinet portfolio that was almost given to him. "Nuclear policy continues to have a military connotation," he said. "The building of an atomic submarine cannot be viewed as a priority." Of all the organizational models tried out on the sector, at least one—which would seem to leave some of the activities in that field in the hands of civilian, has Pinguelli's support. This is the transfer to the Ministry of Mines and Energy of two state corporations now linked to the secretariat administered by Flores: Nuclebras Heavy Equipment, which makes the machinery needed for nuclear research, and Nuclear Industries of Brazil, which handles the processing of radioactive minerals.

Despite protests by people like Pinguelli, the Navy and the SAE hope to finish building the controversial submarine by 2000, at a cost estimated at \$1 billion. Only six countries have similar vessels: the United States, Russia, Germany, France, England, and China. The

reactor required to propel the ship is being developed at the Institute for Nuclear and Energy Research (IPEN), a CNEN agency headquartered on the campus of the University of Sao Paulo.

Another important face of the Brazilian nuclear program is being developed at the Aramar Experimental Complex, a research center maintained by the Navy in the Sao Paulo community of Ipero. There, experts are working on enriching uranium, an activity which, barring undesirable evidence to the contrary, is targeted exclusively at a market composed of 400 nuclear power plants operating in various parts of the world. The administrators of those plants spend about \$60 billion a year on the fuel needed to generate electricity—fuel that can also be used to produce nuclear weapons.

The parallel program also includes projects of more stratospheric inspiration, such as the Air Force effort to build a nuclear-powered generator specifically for use in satellites. The Army's main project was interrupted during the Collor government and, fortunately, there are no reports that it will be resumed. It involved the construction of the graphite reactor, a contraption used by the more developed countries in the 1950's and 1960's to make the atomic bomb.

Completion of Angra-2 Nuclear Power Plant Planned

*PY2811011092 Rio de Janeiro O GLOBO in Portuguese
25 Nov 92 p 21*

[From the "Economic Perspective" column]

[Text] Angra-2 [nuclear power plant] will be constructed anyway. It will cost the government a bargain \$1.3 billion.

The decision was made during a meeting in which, in addition to the economic area ministers and Eletrobras [Brazilian Electric Power Company, Inc.] President Eliseu Resende, the Armed Forces General Staff (EMFA) chief was present. They presented four proposals to President Itamar Franco: Leave the project as it is now, that is, with the government spending \$100 million per year maintaining the project site and equipment at the port of Rotterdam; complete the Angra-2 and Angra-3 [nuclear] power plants; scrap the two power plants, selling the purchased equipment; or complete Angra-2 and scrap Angra-3. The last alternative, which should be announced soon, was chosen.

According to one of the participants, the EMFA chief was invited to attend the meeting because the power plant's security is a military affair.

EGYPT

Editorials on Iranian Efforts To Obtain Weapons

Efforts Decried

NC2511131492 Cairo AL-AHRAM AL-MASA'I in Arabic
16 Nov 92 p 2

[Editorial: "Why is Iran Arming Itself Now?"]

[Text] Daily we hear reports of a frenzied Iranian effort to obtain modern weapons—the advanced conventional type and weapons of mass destruction.

When the Soviet Union collapsed at the beginning of the year and the Soviet state disappeared from the world's political map, the Soviet arms industry was affected and many Soviet nuclear scientists found themselves without jobs or incomes. Iran sought to attract them and tempt them with oil money to benefit from their work in the making of an Iranian nuclear bomb.

Many recent reports revealed that over 30 Iranian nuclear scientists are in China to train in the production and operation of nuclear reactors. Iran wants to buy Chinese nuclear reactors and there is the old Chinese-Iranian cooperation according to which Iran obtained the famous Chinese Silkworm missiles during its war with Iraq.

In the conventional weapons sphere, Iran is trying its best to obtain advanced weapons, such as submarines and all types of missile. Iran signed a deal to buy two Russian submarines, one of which has arrived at the Iranian port of Bandar-e 'Abbas. The second is due to arrive early next year. It is even said that Iran is on its way to buying a third submarine.

The new Iranian submarine is of the "Kilo" class. It is a modern diesel-operated attack submarine with a long range and able to stay submerged for long periods. Its engines are quiet, making it difficult to discover, and it is armed with eight antisubmarine and antiship torpedoes.

So, for the first time in its history, Iran has obtained submarines and become the only Gulf country to have advanced maritime weaponry.

This raises a big question: Why is Iran arming itself with all these weapons? What serious dangers are threatening its security after the events in Iraq?

The late shah of Iran gave two reasons for his effort to build a large Iranian army. The first was the existence of a long common border with the Soviet Union. He wanted an army capable of resisting any Soviet invasion until reinforcements arrived from abroad. The second reason was to resist the radical and liberation movements in the Middle East region that were motivated by the 'Abd-al-Nasir era. Further, the West wanted to rely on the shah as the Gulf cop, but all these factors have now disappeared. The Soviet Union has collapsed and been replaced by a state that cannot even threaten Iran.

Ironically, the center of the radical movements has shifted to Iran, history having bypassed the era of liberation in the region led by Egypt. The West does not need anyone to protect its interests in the Gulf, because it has decided to defend them itself.

So why is Iran arming itself? Clearly Iran wants to turn itself into a major regional power in the area. It is also clear that it is trying to impose its hegemony on the fate of the Gulf to serve its regional role and the great powers that are cooperating with it. It is clear too that Iran is unjustifiably expanding the circles of its national security to include the entire Arab region and is seeking to export its radical ideology to the Arab countries through terrorism in the name of religion.

But, Iran is wrong in all its calculations, because no one will let it exceed its natural size and arbitrarily bypass the historic roles of the various other regional powers. You cannot rule out the possibility that in a few years Iran will find itself falling into the same trap as Iraq's Saddam Husayn did by his disastrous calculations.

Saddam's 'Thorny Road' Opposed

NC2611072592 Cairo MENA in Arabic
0605 GMT 26 Nov 92

[Text] Cairo, 26 Nov (MENA)—AL-AKHBAR comments in its editorial today on reports carried by news agencies and foreign intelligence services about Iran's constant efforts to buy conventional weapons and nuclear-powered submarines, for which they are paying billions of dollars that should be spent on the poverty-stricken Iranian people.

It says: The prevailing view among various observers is that Iran is buying these weapons for specific objectives. Logic justifies this view.

It then asks: Have not Khamene'i, Hashemi-Rafsanjani, and the other members of the Iranian regime learned a lesson from what happened to their neighbor Saddam Husayn? Have they not learned a lesson from a ruler who preceded them in massing weapons from all over the world, and who spent Iraq's vast oil wealth on stockpiling weapons and attempting to manufacture nuclear weapons and other weapons of mass destruction for the sake of achieving a false leadership?

AL-AKHBAR also asks: Of what use were all these weapons which the Baghdad ruler massed when all countries decided to confront him and cut him down to size following the catastrophe of the Kuwaiti invasion? What has become of him now that he is living under illusions?

The paper adds: Is there not a single sane man among Iran's rulers who has read the lessons of past and contemporary history and learned from them, and who can draw the attention of his amateurish political colleagues to what could happen to them and to their country if they one day attempt to follow the same

thorny road that Saddam Husayn risked to cross and which led him to destruction?

INDIA

Reportage on Policy Toward Nonproliferation Pact

Washington Talks, UN Stand

93WP0046A Madras *THE HINDU* in English
16 Nov 92 p 6

[Article by R. Chakrapani; words in boldface, as published]

[Text] Washington, Nov. 15. In the course of the Indo-U.S. talks on security and nonproliferation issues held here this week, the U.S. suggested that, following the examples set by it and Russia, India and Pakistan make unilateral declarations not to produce fissile materials that could be used in nuclear weapons.

The head of the Indian delegation, Mr. Chandrasekhar Das Gupta, Additional Secretary in the Ministry of External Affairs and Ambassador-designate to China, informed the U.S. delegation that rather than make unilateral or bilateral declarations in an India-Pakistan context, India would like such a declaration to be broad-based on a global basis encompassing all nuclear nations.

The suggestion was put forward by the U.S. during discussions on confidence-building measures. The Bush administration announced some time ago that it will not produce fissiles used in nuclear weapons programme and Russia came out with a similar announcement.

Renewed plea on NPT: Issues that figured during the talks held on Thursday and Friday at the State Department included a renewed suggestion from the U.S., though on a low key, that India will be well advised to sign the Nuclear Nonproliferation Treaty (NPT) and the security threat in South Asia arising from "State-sponsored terrorism"—from Pakistan.

According to a senior Indian official who took part in the talks NPT figured only indirectly. The U.S., however, was not insistent on India signing the NPT as this topic was not the main focus of the talks. The same was the case about the Five-Nation Conference to consider the question of nonproliferation in South Asia but it was not discussed in the regular context.

On the issue of State-sponsored terrorism in India's border States, it was forcefully pointed out to the U.S. side that though these acts of terrorism from across India's borders were, at the moment, provoking low-intensity or sub-conventional conflicts, they did constitute a security threat to the region.

The talks generally touched on security and nonproliferation scenario and not merely India-Pakistan issues.

The much larger U.S. delegation was led by Mr. John Malott, Principal Deputy Assistant Secretary of State

and included officials and experts from the Defence Department, arms control and disarmament agency and the National Security Council.

The first phase of these talks was held at New Delhi in June. The three sessions of talks held here in the past two days marked the last such dialogue under the aegis of the Bush administration.

The next phase of talks and at what levels they should be held are matters for the new Clinton administration to decide after it takes over on January 20 next. Both Governments will remain in touch about future talks. It was indicated by the U.S. side that it will make a recommendation to the successor administration, obviously for continuance of the dialogue.

Describing the two meetings held at New Delhi and here, a senior Indian participant in the talks characterised the talks as "very useful, very constructive and very positive."

The U.S. side gave a similar certificate saying, in a statement, that these talks were "characterised by a cooperative, friendly and positive tone throughout." The State Department added that the talks were not intended to produce any agreement but was an effort "to reduce the global spread of weapons of mass destruction and to promote peace and stability."

During the talks India welcomed the positive measures taken both by the U.S. and Russia to reduce their nuclear stockpiles and reach agreements. The conclusion of the draft convention on outlawing chemicals and biological weapons of mass destruction and the cooperation extended by India was noted with satisfaction.

Mr. Das Gupta revived the "Action Plan" proposed by the late Prime Minister, Rajiv Gandhi, at the U.N. disarmament session in 1980 for a phased programme of nuclear disarmament. He suggested that the U.S. take this into consideration while drawing up any nuclear package.

On the Missile Technology control Regime, Mr. Das Gupta made it clear that India, though not a signatory of the MTCR, was observing all the restrictions it imposed on the country's export programmes.

'Nuclear disarmament is a global issue'

UNITED NATIONS, Nov. 15. India has reiterated its stand that nuclear disarmament was a global issue and could not be resolved by establishing nuclear weapons free zones.

Opposing a resolution in the United Nations General Assembly's political and security committee calling for establishment of nuclear weapons-free zone in South Asia, the Indian Ambassador, Mr. Satish Chandra, said partial measures could not achieve the goal of complete nuclear disarmament.

The Pakistani-sponsored resolution was approved by the committee by 117 votes with only India and Bhutan

casting negative votes. Twelve members abstained on the resolution that was cosponsored by Bangladesh.

The committee also approved a resolution on holding a conference in 1995 to review the Nuclear non-Proliferation Treaty by 133 votes with India and Cuba abstaining.

Mr. Chandra said India fully supported non-proliferation and opposed any vertical or horizontal proliferation of nuclear weapons. But it had not signed the treaty as it was discriminatory and placed restrictions on non-nuclear weapon states without imposing similar curbs on nuclear weapon countries.

The resolution moved by Peru takes note of the decision to form a preparatory committee for the conference and requests the U.N. Secretary-General to provide necessary services for its meeting. The first meeting of the committee is expected to be held in New York from May 10 to 14 next year.

Another resolution urged member states to conclude agreements on nuclear non-proliferation, disarmament and confidence building measures at regional and sub-regional levels. The resolution was approved by 130 votes with India, Bhutan, Cuba and the Laos People's Democratic Republic abstaining. There was no negative vote. The resolution now goes to the General Assembly which is expected to approve them in the form sent as these have been debated in the committee in which all the member-states were represented.

The resolution calling for the creation of a zone of peace in South Asia has been coming before the committee every year for over 16 years. This year's resolution was similar to that of last year which was carried by 104 votes to three with 25 abstentions.

The Indian envoy, Mr. Satish Chandra said the nuclear disarmament issue must be solved globally.

AEC Chairman's Remarks

93WP0046B Bombay *THE TIMES OF INDIA* in English
31 Oct 92 p 13

[Text] CALCUTTA, October 30. Dr. P.K. Iyengar, chairman of the Atomic Energy Commission, said that the nuclear non-proliferation treaty (NPT) was discriminatory and nobody could ask India to sign it.

Given the political will and supported by scientific and industrial community, India could remain out of the clutches of the bigger nations, he added.

Speaking to newsmen here on Wednesday, Dr. Iyengar, who is also secretary to the department of atomic energy, said it would no longer be easy to force India to sign such a treaty where some of the big nations would continue to enjoy the monopoly of having nuclear weapons.

Referring to France's refusal to supply enriched uranium for the Tarapur reactor after the expiry of the existing

treaty in 1993, Dr. Iyengar said that India had the capability to produce enriched uranium.

He said India did not want to produce nuclear weapons, but it had the technology to do so. India had already proved its capability in this respect in 1974. Asked if necessary how quickly India could manufacture an atom bomb, Dr. Iyengar replied that it depended on how quickly one needed it. Pressed to give a definite time-frame, he refused to answer the question.

When a newsman wanted to know whether the preparedness was only a screw-driver turn away from the actual production, Dr. Iyengar again parried the question saying it was not important whether it was one, half or a quarter screw-driver turn away. The important thing was India had now the capacity to produce such a bomb.

Dr. Iyengar was categorical in his statement that the NPT in its present form was not acceptable to India. If all the nuclear nations dumped their weapons and stopped production of nuclear weapons, India could agree to sign such a treaty. Fortunately India was no longer in such a situation where it could be forced to sign such an agreement.

Dr. Iyengar announced that the department of atomic energy had decided to set up a super-conducting cyclotron at the Variable Energy Cyclotron Centre (VECC) in Calcutta. This would be the world's fifth such super-conducting cyclotron and it would be built indigenously at a cost of Rs. 34 crores. It was expected to be ready for operation in another six years.

He said since the Saha Institute of Nuclear Physics, situated in the same complex at the Salt Lake as the VECC, had also a cyclotron like the VECC, it was felt upgrading of the facility at this centre by setting up of the super-conducting cyclotron would go a long way in carrying out further basic researches in nuclear science.

He also announced that in order to facilitate co-ordination between the VECC and Saha Institute, it had been decided that Dr. Bikash Sinha, the director of VECC, would also be made the director of Saha Institute of Nuclear Physics with the retirement of the present incumbent Dr. Monoj Paul by the end of this month. Dr. Sinha would hold the two posts concurrently.

Referring to newspaper reports of attempted Pakistani espionage in Indian nuclear facilities, Dr. Iyengar said that he was not aware of any such incident. He said the security measures at the nuclear facilities were fool-proof and so far there was no evidence of any laxity in the security measures.

Dr. Iyengar said what with cut in the plan allocation and inflation, the department of atomic energy had suffered a small set back in the field of nuclear power generation. He said they were finding it difficult to set up new nuclear power plants because of paucity of funds.

The government had asked them to go for commercial borrowing but since it would enhance the cost of production of power because of the high interest rates on commercial loans, the department was going slow in this regard.

Bilateral Pact Advocated

93WP0046C Bombay *THE ECONOMIC TIMES*
in English 15 Oct 92 p 8

[Editorial—"Unclear Nuclear Option"]

[Text] India and the U.S. have been conducting a not-too-delicate minuet over the nuclear issue for some time now. In this context, it has been reported that India may allow nuclear safeguards of the International Atomic Energy Agency (IAEA) to be applied on its power reactors. Some people suspect that India may be about to give in to Western pressure on the issue in return for some unspecific promises. Whether that is so remains to be seen, but the idea is not new. It may even have some merit. Still, before it is taken further, it must be emphasised that any such agreement must be a voluntary and a bilateral one between India and the IAEA, unlike the tripartite safeguards arrangements whenever nuclear technology transfers are involved. Since 1988, for example, China and the IAEA have such a bilateral agreement. But there is a crucial difference between the Indian and the Chinese cases. None of the Chinese nuclear facilities were under any IAEA safeguards when it entered the agreement. Also it was already a nuclear weapons state in the NPT sense. So with its recent accession to the NPT it has all the advantages that the treaty bestows on a weapons state. Even this voluntary move on the part of China came after three years of the declaration of its intent at the 29th General Conference of the IAEA in 1985. India has not made such a declaration at the IAEA so far. Nor has there been any internal debate as yet on the matter, let alone a consensus. But if as a result of a debate, a consensus does emerge about allowing international inspections of Indian power reactors, there is no reason why the regime should be restricted to future units alone. It can include hitherto unsafeguarded power reactors as well.

If the arrangement is voluntary, the scope of the agreement can be decided by India. This will let it determine which nuclear facilities can be brought under safeguards and which ones not. China, in fact, has retained the option of withdrawing any facility from safeguards if it so decides. So if the weapons option is the issue for India and since power reactors hardly ever become the source of fissile materials for weapons, the main argument in favour of such an arrangement would be that India would retain the nuclear option through its unsafeguarded research reactors.

The U.S. has been bringing severe pressure on India to make it sign the NPT and/or get into regional non-proliferation arrangements. The IAEA, on the other hand, has been moving towards increasing the scope of

its safeguards regime for nuclear technology transfers to NPT non-signatories by making them more intrusive. Both points of view, however, seem to be converging towards a regime of "full-scope" safeguards. This implies bringing all nuclear installations under safeguards in a tripartite agreement.

In contrast, will getting into a bilateral agreement help in gaining access to nuclear technology? Unfortunately not, as such technology is available only from the members of the Nuclear Suppliers Club (which decided in April 1992 that nuclear technology would be exported only under full-scope safeguards). This condition is unacceptable to India as it is inimical to the growth of indigenous nuclear technology. So is there some political mileage to be gained? Can India convince the world of its peaceful nuclear policy by negotiating a safeguards arrangement which is essentially similar to those between nuclear weapon powers and the IAEA? Alas, in all probability, no. Instead India might end up paying for establishing the infrastructure for implementing wide ranging safeguards on its power reactors. Clearly, India's room for manoeuvre is very limited. The government's negotiating skills will be severely tested.

French Supply of Nuclear Fuel to Continue

93WP0039A Madras *THE HINDU* in English
16 Nov 92 p 1

[Text] Paris, November 15. France will continue to provide nuclear fuel for the Tarapur Atomic Power Plant after the present supply agreement ended next year, an official spokesman of the French Government said here.

France would also plead with other nuclear powers for inclusion of India in any emerging safety regime aimed at preventing diversion of nuclear and missile technology for weapons programmes, Mr. Maurice Gourdault-Montagne, the French External Relations Ministry spokesman, told a visiting UNI correspondent.

Mr. Gourdault-Montagne said the visit of the Prime Minister, Mr. P.V. Narasimha Rao, to Paris last September was very significant in giving a new boost to the bilateral relations. Contrary to the news reports on the visit, it had culminated in establishing a new political and economic understanding between the two countries, he added.

The spokesman said India's continued refusal to sign the Nuclear Non-Proliferation Treaty (NPT) would not stand in the way of the supply of French enriched uranium to the Tarapur plant as New Delhi respected the principle of non-proliferation by desisting from embarking on an atomic weapons programme even after having the know-how.

France, he said, also recognised that India's commitment to peace and international relations was pretty strong as the country was the largest functioning democracy.

Asked about the possibility of French missile technology for India's space programmes, the spokesman said India had amply demonstrated its space capabilities and satellite communication plans. Talks for French help in this area were continuing.

The spokesman said the French Government respected India's view that the existing NPT was unrealistic and it could not be pressured to sign it as negotiations for a new treaty were to start early next year to replace the existing one by 1995. France and India would have regular consultations on NPT renegotiation and the Missile Technology control Regime, he added.

French Minister on Space Research Cooperation

*93WP0047A Hyderabad DECCAN CHRONICLE
in English 25 Oct 92 p 18*

[Words in boldface, as published]

[Text] **Madras, Oct. 24: (PTI):** The French Minister for Research and Space, Prof. Hubert Curien, on Friday night said he saw no difficulty in French firms co-operating with the Indian Space Research Organisation (ISRO) on sub-systems in space satellites, but added that France would not interfere in India's problems with regard to purchase of cryogenic rocket engines from Russia.

Addressing a press conference at Kovalam near here, at the conclusion of an Indo-French seminar on the history of science in the two countries, Prof. Curien recalled that France had made a proposal to supply cryogenic engines to India some years ago, but India had decided to go along with the USSR.

The Indian Minister of State for Science and Technology, Mr. Rangarajan Kumaramangalam, who was present, said with India having chosen the Russian design for the engine and Russia categorically stating that it would not go back on the contract, there was no problem where India was concerned, 'it is a problem between Russia and America,' he said.

Prof. Curien declined to answer a question on whether France would insist on full scope safeguards while renewing the contract for supply of enriched uranium to the tarapore atomic power plant. Mr. Kumaramangalam however said discussions were going on, adding, 'we are still not at a stage where we can say what is on and what is not on.'

FUEL SUPPLY

Mr. Kumaramangalam added that the contract for fuel supply was in force till 1993. There was no need for hurry on the matter, and 'all sorts of options' were available.

On the cryogenic engine, he also said that the engine had to be married to the design of the launch vehicle. It was the fourth or the fifth stage (of the PSLV launch vehicle).

India was on a very advanced stage with the Russian engine, and had its own cryogenic design too.

In response to Mr. Kumaramangalam's remark that India hoped France 'will join us on the ISRO platform' Prof. Curien said some French firms were ready to work with ISRO on satellite sub-systems and their representatives would soon have discussions in this regard.

Prof. Curien, who paid a visit to ISRO in Bangalore on Thursday, said his last visit had been three or four years ago. Since then, ISRO had made 'very large progress' and was now in a good position to build and integrate satellites.

Asked whether France would support ISRO's proposed inter-planetary probes, he said ISRO chief, Prof. U.R. Rao had described this project and he would look at it carefully. Talking of other collaborations with India, he said 'twinning' of research institutions was a good idea.

NASA PROGRAMME

The French Minister, a noted scientist whose expertise ranges from crystallography to space science, said his country annually spent 12 billion Francs for space programmes of which nine billion Francs was on the civilian side and the rest on the military side. In contrast NASA's space programme was for civilian purposes, with an outlay of 15 billion dollars.

Asked about co-operation with Russia in space, he said France had a very strong and ancient co-operation with USSR in space sciences and was looking at the possibility of further co-operation. France and other European countries were involved with Russia on the project to build the European space plane 'Hermes' France would participate in Russia's mission to Mars.

Referring to a range of space programmes including the 'Hermes' the proposal for a low orbit space station 'Freedom,' and the 'Man in Space' project, he said all these things would come up at a ministers' meeting in Grenada on Nov. 10 'we will look carefully at every programme in Europe'. France was not in a hurry on the space plane. Some adaptations had to be looked at to make it more usable than was done in the U.S. and Russia.

To a question on AIDS research, Prof. Curien said France was convinced it was their scientists who had discovered the AIDS virus first. He hoped the controversy with America over this would be resolved soon.

CALL FOR CRUSADE

Prof. Curien, called on scientists to make science more attractive and launch a crusade against 'anti-science', a growing phenomenon in countries where science was well developed.

He said 'anti-science' or 'para-science' was flourishing. It was the duty of scientists to be convincing and attractive, especially to children.

Giving an illustration of 'anti-science,' he said popular newspapers in France often dedicated more space to astrological predictions than to science.

Scientist on Research Center's Contributions

93WP0041A Bombay THE TIMES OF INDIA
in English 31 Oct 92 pp 1, 3

[Article by Vithal C. Nadkarni]

[Text] Bombay, October 30: Scientists at the Bhabha Atomic Research Centre (BARC) in Bombay have developed a high-speed computer using parallel processing with about one-fifth the capacity of a Cray Y-MP supercomputer.

The performance of the computer, based on indigenously available hardware, is being upgraded and evaluated, said Dr. R. Chidambaram, the director of BARC, talking to the press on the occasion of Fonder's Day—the birth anniversary of Dr. Homi J. Bhabha.

Dr. Chidambaram spoke about the major contributions made by BARC to India's nuclear power programme and described a variety of hi-tech advances in reactor controls, reactor safety and in-service inspection systems. The success of BARC and other units of the Department of Atomic Energy (DAE) in nuclear technology and related fields, he said, was "one of the pillars of our national strength in the present climate of technology control regimes."

The BARC scientists have also achieved an international record with the first-ever loading of thorium bundles in a pressurised heavy water reactor core. Earlier, these reactors used to be started using depleted uranium as part of the initial core. This requires 384 bundles. With thorium, the number has been reduced tenfold, to 35 bundles. The thorium loading in a power reactor will provide valuable experience, said Dr. Chidambaram, in the large scale handling of the element in the fuel cycle, which is going to play a major role in India's nuclear power programme in the future.

Similarly, BARC has developed an alternative to the conventional powder-pellet route in the area of nuclear fuels. The main attraction of the new gel-pelletisation process for oxides, monocarbides and mononitrides is that it eliminates radioactive dust hazards. The process is highly amenable to remote and automated handling and thus reduces radiation exposure to personnel.

Other hi-tech developments include the advanced channel inspection system. This is used to check coolant channels in nuclear power reactors without discarding the fuel bundles and isolating the channel. Many channels can thus be inspected simultaneously, reducing inspection time and radiation exposure.

The BARC had also developed high-yielding varieties of groundnut and blackgram (urad dal). These have been released for cultivation in Gujarat, Bihar, Maharashtra and Madhya Pradesh.

Apart from transferring nuclear and allied technologies, Dr. Chidambaram said, BARC had also been involved in sharing spin-off technologies. A major example of this, he said, involved solar not nuclear energy. With inputs from BARC, the Central Electronics Ltd. was able to boost the performance of its photovoltaic cells to match international standards from 9 percent conversion to about 12.5 to 13 per cent efficiency. As a result, hundreds of remote locations in the country are benefitting from stand-alone street and domestic lighting, irrigation and telecommunication systems involving electricity made directly from solar energy.

The message of the chairman of the atomic energy commission, Dr. P.K. Iyengar, was also read out on the occasion. Referring to the geopolitical changes that had recently occurred, the chairman said, "while scientists may not like to attach importance to economic principles which influenced social progress, we had accepted the fact that these changes ultimately decide the pattern of growth and have a bearing on developments of science and technology itself." He added that the last year had been very productive for DAE with Narora-2 and Kakrapar-1 nuclear power units going into operations.

AEC Denies Reports on Making Atomic Bombs

93WP0044A New Delhi PATRIOT in English
23 Oct 92 p 6

[Words in boldface, as published]

[Text] Mangalore, Oct. 22 (PTI)—Atomic Energy Commission chairman Dr. P.K. Iyengar today said the special material plant at Rattehalli near Mysore in Karnataka was concerned only with the study of enriched uranium and had nothing whatsoever to do with the making of an atomic bomb.

"We have no intention of making bombs or lethal weapons from our nuclear research work," Dr. Iyengar said speaking at the inauguration of a two-day seminar on microton for research and applications at the Mangalore University here.

He said the research activities in Mysore would not pose any radiation hazard. The enrichment technique was being adopted so that nuclear energy could be used constructively.

He said American and French government were reluctant to continue assistance for India's research work on enriched uranium and the country was now developing in-built systems to achieve enrichment capability through indigenous technology.

He lauded Karnataka for its significant contribution to the field of nuclear and radiation technology and research and said a number of luminaries from the State occupied important positions in India's atomic research programmes.

Norway's Charge on Heavy Water Rejected*93WP0048A Madras THE HINDU in English
30 Oct 92 p 1*

[Article by K.K. Katyal; words in boldface, as published]

[Text] NEW DELHI, Oct. 29. India has rejected Norway's charge that its consignments of heavy water, meant for Germany and Romania, were clandestinely diverted to it. There was no need for India, it is pointed out, to get secret supplies illegally when plenty of heavy water was produced here—and was even exported. The Norwegian consignments may have landed in some other countries in the region, according to India. It resents being blamed on the strength of information provided by those who violated the export regulations.

Norway's charge was contained in a letter from its Foreign Minister, to the Prime Minister, Mr. P.V. Narasimha Rao, some two months ago. Straightaway proceeding on the assumption that the consignments had landed in India, he wanted to know their whereabouts. As a signatory to the Nuclear Non-Proliferation Treaty, Norway, said the letter, felt committed to get this information. It sought Mr. Rao's help in starting negotiations for the return of the consignments, allegedly received in India.

IAEA safeguards: The details of the Foreign Minister's letter were, apparently, leaked to the Norwegian media which, going further, promoted the belief that India had refused International Atomic Energy Agency inspection and that it was already producing atomic weapons. This is factually not correct—IAEA safeguards were accepted whenever there was a provision to this effect in international agreements, and as for India's atomic and nuclear status, the position was well known and it was not what was projected in the Norwegian media.

India's reply to the Foreign Minister's letter was sent not by the Prime Minister but by the Chairman of the Atomic Energy Commission, Dr. P.K. Iyengar, it is learnt. He found it odd that Norway's supplies to Germany and Romania were not subjected to IAEA safeguards as should have been the case with a signatory of the NPT. Had that been done, the supplies could not have been diverted to a third country secretly.

Dr. Iyengar, it appears, gave details of India's production of heavy water from the early Sixties—that it had sufficient stock, which at one stage was supplemented by imports from western countries including the U.S., as also the erstwhile Soviet Union, in keeping with the norms of the IAEA. In 1965, India even exported some 11 tonnes of heavy water to Belgium. There were plenty of supplies in India when the Norwegian consignments were supposed to have reached here. At present, there is a surplus of some 500 tonnes, intended to be used in the future for power generation projects.

Other possibility: What Dr. Iyengar sought to emphasise was that it was pointless for India to obtain a small

quantity through clandestine channels when there was no dearth of heavy water here. Dr. Iyengar drew attention to the possibility of the Norwegian supplies having been received by some other countries in the region, especially when the case of clandestine procurement of nuclear related material by some in India's neighbourhood was well known. Dr. Iyengar is believed to have referred to the impropriety of India being blamed on the basis of information given by those traditionally known for violating the norms governing the import and export of sensitive material.

While explaining India's stand against the discriminatory nature of the NPT, the reply stressed New Delhi's non-proliferation concerns. At the same time, India, it was pointed out, was opposed to curbs on the transfer of technology, remotely linked with nuclear development.

There is, perhaps, a domestic compulsion for the Norwegian Government to publicise its vigilance in regard to nuclear material—in view of the presence of a strong constituency, advocating the cause of non-proliferation and human rights. Norway, incidentally, has given asylum to a number of Sikhs from India.

Heavy Water Upgrading Plant Commissioned*93WP0040A Madras THE HINDU in English
3 Nov 92 p 4*

[Text] Bombay, November 2. Dr. R. Chidambaram, Director of the Bhabha Atomic Research Centre (BARC), has disclosed that the Centre commissioned the heavy water enrichment plant at Hazira for upgradation of heavy water to reactor grade level of 99.82 per cent. Ten such heavy water upgrading plants, based on the vacuum distillation technique and two more on the electrolysis technique, have been commissioned at various nuclear power plants and heavy water plant sites.

Dr. Chidambaram was delivering the BARC Founder's Day address.

During the year, BARC had commissioned a sludge hygenisation research irradiator (SHRI), at Baroda for treatment of sewage sludge. India was the first nation in Asia and sixth in the world to set up such an experimental sewage treatment plant. He said the plant would treat about half the sewage of the Baroda Municipal Corporation at full capacity and generate data for the design and construction of such plants for other cities in the country and abroad.

A gamma irradiation pilot plant has been set up at Kottayam in Kerala, for the Rubber Board for vulcanisation that needs no addition of sulphur.

Dr. Chidambaram said at the request of the Military Engineering Services, BARC had investigated a seepage problem at the naval dry dock 'Matsya' at Visakhapatnam. Army engineers took remedial measures and the dry dock is fully operational now.

Paying tributes to Dr. Homi Jehangir Bhabha, he recalled his dedication and exhorted scientists and others in the BARC to reaffirm their commitment to excellence.

Missile Testing Range Under Construction

*93WP0042A Bombay THE TIMES OF INDIA
in English 31 Oct 92 p 9*

[Words in boldface, as published]

[Text] Mysore, October 30: The defence ministry has decided to establish a "missile testing range" in the Kuppekollagatta area of Hunsur taluk, about 32 km from here, and construction activities at the site are in full swing under the supervision of the army engineers.

The army had acquired about 5,800 acres of land belonging to the revenue and forest departments and initiated measures for acquisition of 925 acres of agricultural land belonging to farmers of Hosaramanahalli village in Hunsur taluk. Even, the state government has appointed a special land acquisition for the task.

The Kuppekollagatta area—a hilly terrain selected for the purpose is situated on the left side of Mysore-Mangalore state highway. The northern boundry of Kuppekollagatta which starts from two kms off the state highway ends on the southern side with the Heggadadevanakote border.

Though, the authorities had kept the news of missile testing range a closely guarded secret, the information gathered from various sources by this correspondent indicated that the construction work connected with the range would be completed within two years.

Even before the completion of the land acquisition process, the military authorities have started construction of compound wall of the range and a Hyderabad-based construction company has been awarded the contract.

An official source disclosed that, the missile testing range was earlier proposed in Bijapur district, but the hostile situation and strong opposition from the local populace in general and the politicians in particular forced the defence ministry to shift the range from there to Mysore district.

An army official who met this correspondent at the site refused to divulge details about the activities there.

However, Mr. Kumar Naik, assistant commissioner Hunsur said he was also unaware of what exactly was being established in Kuppekollagatta area of the taluk.

Another official of the revenue department revealed that, the defence authorities after selecting the site in March requested the revenue department to acquire the land and hand it over to them. But, the revenue department requested the government to appoint a special officer for this purpose. "Based on the request, the state government nominated Mr. Hansbhavi, special land

acquisition officer Harangi project, as the land acquisition officer for the missile testing range."

The defence authorities have also set up an office in Mysore to look after the progress of the construction work and entrusted the supervision work to the chief engineer construction (research and organisation).

Meanwhile, the farmers at Hosaramanahalli, who are loosing all their land, were more worried and seemed to be in a "helpless" mood. Fate also seems to be not in their favour. This was not the first time they were being displaced by a project. As the name of the village suggested, they all belonged to a Ramanahalli village on the backwaters of the Krishnaraja Sagar. When the Krishnaraja Sagar was built all the 500 families there were shifted to the present site and was called as Hosaramanahalli. Later after several years of efforts, the government allotted a revenue land for the farmers whose lands were submerged by the Krishnaraja Sagar Dam, Mr. Linga Naik an eighty year old farmer said.

Mr. Linga Naik, who owns a four acres land in the proposed range site said all the villagers' lands were situated in the area marked for the test range and they have no alternative land for agriculture. If the government acquired the land the village would be literally ruined and 6,000 people would be converted into destitutes even though the authorities paid compensation for the land, he lamented.

He said, they were ready to handover their land for the project, if the government provided alternate land for them. No amount of compensation would match our efforts put in for the conversion of there barren lands into a fertile land coconut farms and mango groves, he felt.

He also said that, they have represented about this to the local MLA Mr. Chikkamadu Naik who incidentally hails from the same village and Mrs. Chandraprabha Urs, the Lok Sabha member, who also belongs to their taluk.

Successful Test of Liquid Propulsion Reported

*93WP0043A Hyderabad DECCAN CHRONICLE
in English 29 Oct 92 p 5*

[Words in boldface, as published]

[Text] **Warangal, Oct. 28:** The static testing of two liquid propellant rocket motors with different chamber pressures of 100 kg thrust has been successfully carried out at the Rocket test lab of mechanical engineering department of the Regional Engineering College, Warangal, recently.

Red fuming nitric acid and G fuel were used as propellant combination for the motors tested successfully. Mr. P. Krishna Rao, an M. Tech. student of the department of mechanical engineering worked on the project for his

dissertation work under the guidance of chief coordinator and the head of the department of mechanical engineering, Prof. C.M. Varaprasad.

In statement Prof. Varaprasad said that the static test facilities existed at very few teaching institutes and the facility was created at Regional Engineering College, Warangal, at a cost of Rs. 30 lakh by the Aeronautic Research and Development Board (ARDB), Union Ministry of Defence.

Development of liquid propulsion technology is a highly sophisticated area. The test results have shown that the facility has proved its design capabilities for carrying out advanced research in the area of liquid propellant rocket combustion.

IRAN

President Reportedly Visited Nuclear Center

*LD2811213692 Moscow ITAR-TASS in English
2104 GMT 28 Nov 92*

[Text] London November 28 ITAR-TASS—The main Iranian opposition group said on Saturday that President Akbar Hashemi-Rafsanjani was visiting one of Iran's secret nuclear research centres in the city of Yazd.

The REUTER news agency reported from Nicosia the Iraq-based Mojahedin-e Khalq said in a statement from its Paris office that Rafsanjani, accompanied by the deputy head of Iran's Atomic Energy Organisation, was evaluating "the progress of the work on a major (Revolutionary) Guards Corps nuclear research centre."

"The Guard Corps operates one of the regime's largest secret nuclear research centres which has been built underground near the city of Yazd," the statement said.

The statement also said rich uranium mines in the Saghand Desert region northeast of Yazd meant the research centre "could serve as an independent nuclear centre in the future."

Iran's official news agency IRNA said Rafsanjani was in Yazd, 450 km south of Tehran, to "meet the local people and authorities and to review problems and needs of the province", including water shortages.

The Iranian opposition has long accused Tehran's rulers of pursuing a nuclear weapons capability to bolster their brand of Islamic fundamentalism.

Iranian Deputy Foreign Minister Ali Muhammad Besharati on Friday described media reports that Iran was planning to acquire nuclear weapons as "a lie and a plot".

Foreign Minister Denies 'Rumors' on N-Arms

*LD2711124492 Tehran Voice of the Islamic Republic of Iran
First Program Network in Persian 1030 GMT 27 Nov 92*

[Text] 'Ali Mohammad Besharati, senior deputy foreign minister of the Islamic Republic of Iran, was the pre-sermon speaker of the Tehran Friday prayers today. He described the rumors spread by the enemies of the Islamic revolution inferring that Iran is on the verge of obtaining nuclear weapons as a lie and a plot, saying: We have no need for nuclear weapons. Iran is a signatory of the [nuclear] non-proliferation treaty and honors this agreement.

He strongly rejected the enemies' evil propaganda inferring that Iran, through the purchase of modern military equipment, is bent on expansion and said: The occupation of Kuwait showed that we must rely on our own military strength. At the same time, our policy is respect for international norms and non-interference in other countries' affairs. Besharati added: While our neighboring countries are signing military pacts with big powers one by one and while they are strengthening their military weapons, why cannot we replace the weapons we lost during the eight-year imposed war?

Speaking of the military presence of alien powers in the region, he said: This presence is a threat to the territorial integrity of [the region's] states. Our weapons, quantitatively and qualitatively, cannot be compared to the weapons present in the region.

The senior deputy foreign minister of our country reiterated: Today we need reconstruction in all fields. We must rapidly undertake this task with all our might. Continuing his speech, Besharati pointed to Serbian crimes in Bosnia-Herzegovina and said: The West has closed its eyes to this problem. Even the false human rights is silent. [sentence as heard]

Russian Envoy Comments on Supplying Arms

*NC2611142392 Cairo MENA in Arabic
1147 GMT 26 Nov 92*

[Text] Cairo, 26 Nov (MENA)—Foreign Minister 'Amr Musa today met with Vladimir Polyakov, Russian ambassador in Cairo. The ambassador said after the meeting that the talks dealt with the Middle East situation and the developments in the Arab-Israeli peace negotiations before the start of the eighth round of talks. The Russian ambassador said that today's meeting is part of the Egyptian-Russian consultations and exchange of opinions concerning issues of mutual interest.

In his statement, the Russian ambassador in Cairo said that there is an agreement between Egypt and Russia over international and regional problems. This, the ambassador added, would enable the two sides to play their roles in solving these problems.

Ambassador Polyakov noted that his country is conducting close contacts with Egypt, the United States, Israel, and the Palestinians to work out a solution to the

problems which are obstructing the road of peace negotiations. He emphasized that Russia calls for continuing the peace negotiations and talks and for finding solutions acceptable to all sides.

To a question about supplying Iran with Russian weapons, the Russian ambassador said that his country's

relations with Iran are good, noting that there is economic and military cooperation between the two countries. He said, however, that this does not mean that Russia is trying to make Iran a superpower in the region. He said that the quantity of Russian weapons sold to Iran is 10 times less than the amount of weapons the United States is selling to the region's states.

Russia Said Harmed By Uranium Deal With U.S.

93WP0031A Moscow MOSCOW NEWS in English
No 44, 1-8 Nov 92 p 9

[Article by Vladimir Kiselev under the rubric "MN [MOSCOW NEWS] Investigation:" "Who Will Profit by the Uranium Deal?"]

[Text] There has been nothing like it in our nuclear age. Russia is selling highly concentrated uranium from its missile warheads. Our recent potential enemy will have to rework nuclear explosives into fuel for peaceable nuclear power plants. It is believed, however, that the contract will deprive the Russian nuclear power industry of development prospects and its destruction is inevitable.

Non-Secret Secrets

A question arose with the onset of the disarmament era: what was to be done with the warheads? It is then that the idea originated (from the American think tanks I was told) of selling the hundreds of tonnes of highly concentrated uranium released to overseas partners. The talks on this commenced last December. Two American companies were supposed to turn the bomb material, concentrated to 90 percent, into low-concentrated fuel for the power industry. Having concluded preliminary contracts, they hoped to amass big profits from reselling Russian uranium. But the governments took the matter into their own hands. On August 28 the agreement was signed by General Burns on behalf of the US Department of Energy and by Deputy Minister Yegorov on behalf of the Russian Federation's Ministry of the Nuclear Power Industry. It is expected to be approved by the end of this year.

Russian uranium is cheaper than American. Moreover, turning imported uranium for weapon systems into fuel for the power industry is a lucrative business: no need for pits, sublime productions units or concentrating mills. The only thing to do is dilute highly concentrated uranium with natural uranium.

Mr. Sewell of the US Department of Energy has explained that with this deal the federal budget will not feel any additional burdens, as the Russian raw material will be bought with the money saved on concentrating their own uranium.

In the view of the leadership of the Ministry of the Nuclear Power Industry, concentrated uranium can give Russia the several billion dollars it needs badly. Moreover, the headache of where to keep nuclear materials will be alleviated.

But why then has the world learned about the unprecedented transaction from the Bush administration solely after lengthy secretive (as they are described in the American press) talks?

The Department of State spokesmen, to whom THE NEW YORK TIMES has referred, explain this by their reluctance to agitate the Russian military, as some of

them are saying they have been betrayed by Russia's nuclear sword becoming blunt.

I got in touch with Igor Smirnov, Commander-in-Chief of Strategic Rocket Forces. I heard their experts had really not been involved in preparations for the talks.

"There is no need for this. It is better to have fewer but higher-quality weapons," explained Nikolai Yegorov, Deputy Minister of the Nuclear Power Industry. "But no one made a secret of the talks. No doubt, they were held with the participation of representatives from Technabexport (a government department dealing with technical supplies and exports—Ed.) and Shishkin personally."

It is not accidental that the talk turned to Technabexport. After all, this association—now a joint-stock company—has held a monopoly for over 20 years in representing our country on the world uranium market.

But Albert Shishkin, Director-General of Technabexport, said that his firm had taken no part in the talks. He personally had not attended any meeting at the Foreign Ministry or anywhere else. Judging by the information he communicated, a joint venture will be set up for the sale of highly concentrated uranium. As this theme is extremely delicate, the talks were confidential.

Viktor Mikhailov, D. Sc. (Engineering), Minister of the Nuclear Power Industry, qualified the White House's public statement on the purchase of warhead uranium as somewhat premature. "We didn't agree that the Americans would announce this. But, evidently, the presidential team considered this to be a good trump in the election race. Make sure for yourself—it is not made as confidential," he showed the initialled contract across a broad table. Yet he turned down our request to grant us a copy for MN [MOSCOW NEWS] experts to study the terms of the deal.

But be that as it may, the many-month-long silence was broken. Our president, too, made a televised address speaking highly of the coming transaction.

Postal Romance

One after another, three letters were received at the Ministry of the Nuclear Power Industry from the Ural Electrochemical Complex, until recently more known as Sverdlovsk-44, which sharply protested against the sale of the uranium meant for weapons.

I got in touch with the complex over the phone. Its managerial personnel were in low spirits—waiting for a response from high offices in Moscow.

"Ural people apprehend that the fuel obtained from weapon uranium may oust their products from the uranium market, saturated as it is to overflowing," explained Yevgeny Mikerin, head of the main scientific-technical department at the Ministry of the Nuclear Power Industry. "They are afraid of losing the dollars

they get from the export of low concentrated uranium. And this, even after all deductions, comes to tens of millions annually."

The Ministry of the Nuclear Power Industry stands to gain in any eventuality. The currency streamlet, turning away from the enterprise, will flow into ministerial accounts. But in this case the complex will simply come to a halt.

"This is evidently possible," Mikerin agreed. "Unless the Americans cede part of the market or close down some of their concentrating mills."

The overseas colleagues, for their part, are not in a hurry to come up with promises. In any case such a variant has not been stipulated in the initialled contract.

An alarm has been sounded by Vitaly Mashkov, the Russian President's representative for the Sverdlovsk Region. Having worked for many years in the nuclear power industry, he believes: it is capable not only of saving itself, but also of pulling the whole country out of its predicament. Having, however, sold the weapon uranium for the sake of immediate gain, we will deprive the sector of development prospects.

Mashkov wrote a letter to Yuri Boldyrev, head of the Control Department under the auspices of the President of the Russian Federation.

I traced the route of his letter. From Boldyrev's office it was forwarded to Yegor Gaydar's secretariat, from which it went to the sector for the affairs of the defense industry complex and conversion. One more somersault—and the letter landed in the Ministry of the Nuclear Power Industry. Six weeks later an aide to the minister prepared a reply. Let me recall that it is Nuclear Ministry officials that are now busy turning their idea of selling highly concentrated uranium to America into reality.

Mashkov ventured to sever the officialdom's vicious circle. We met.

"Russian nuclear power industry workers have several technologies which are the best in the world, and are five to ten years ahead of Americans, especially in isotope separation," Mashkov said. "Our centrifugal method of concentration is about ten times better than their diffusional one, whereas its power consumption is roughly 20 times lower. Having re-equipped our four separating complexes from diffusion to centrifuges, we have released the equivalent of three St. Petersburg nuclear power plants.

"As long as we were staying behind the iron curtain, forging warheads which nobody needed and not looking elsewhere while the Americans controlled 50 percent of the world uranium market, they didn't worry. But all of a sudden we started actively battling our way into the market. The USA accused us of nuclear dumping. We, for our part, opened our top secret complexes for universal observation. That came as a shock. Americans

were confident that Russians were tailing behind them. It turned out that the opposite was the case. It has been discovered: the cost of Russian concentrated uranium is much lower than that of the American, we are terribly competitive, and no longer desire to rest content with the pitiful 5 percent of the world market.

"There is one more nuance. Centrifugal production capacities were built with a reserve. However, there was the Chernobyl blast, then disarmament commenced. Recession set in instead of the expected rapid growth of nuclear power engineering. But fissional installations cannot be brought to a halt—they will be destroyed. For the nuclear power industry to be left without markets is the same as to die in this situation.

"The Americans will meet their requirements with our highly concentrated uranium. Having saved a lot on this, they will get a respite for modernizing their antiquated production capacities. That's all—we have lost the war for the market, not having even started it."

Is the Devil So Terrible?

A sheet of paper is speckled with figures. Yasen Shevelev, D. Sc. (Engineering), head of the department of the theory of nuclear reactors at the Russian research center, more known as the Kurchatov Institute, puts away his pen: "And this is what I didn't expect at all..."

I came to Shevelev with a request to take a look at the likely development of events.

We deliberately aggravated the possible situation to the extreme: the USA will get a thousand tonnes of our weapon uranium.

"There will be enough of it for all the American industrial reactors to work for at least ten years. Or for the reactors of the whole world to work for two and a half years. The scope of getting a foothold on the already established market is so great that rivalry between this method of meeting the needs of nuclear power plants and the traditional one becomes inevitable. Consequently, internal competition will commence in the Russian nuclear power industry as well. After all, what they will buy will be either weapon uranium or a low-concentrated variety. And they will accept an increase in our quota only if we lower the price of the raw material. Military uranium will definitely gain the upper hand for economic considerations. After all, it has already been produced, there is no demand for it and, consequently, it is cheap. Then the separating industry will close down. In short, a firm possessing both potential flows of uranium must think twice about the destiny of its civilian part and act with greater circumspection. All the more so since the same amount of money can be received for both weapon uranium and the low-concentrated variety."

This view was supported by Anatoly Klimenko, D. Sc. (Engineering), director of the private center of economic research studies, who added that building uranium reserves was one of the most profitable areas of capital investment. According to long-term forecasts, its market

price will keep growing. Cheap resources are being depleted. And if we ruin the separating industry, our own uranium will be sold to us at sky-high prices in the middle of the next century.

Viktor Mikhailov sees no danger in the rise of two competing flows of fuel. True, he makes a reservation—on the condition that the consignments of highly concentrated uranium put on the market will be relatively small, and their appearance will by no means diminish our quota there. This is his main demand, which the contract must depend on. "If the Americans refuse to accept compromises in the anti-dumping campaign," the minister said, "I will be the first to tell Gaydar: we have been cheated, it is time to stop. But who will dilute uranium and in what quantities—that is a technical matter."

Between Ourselves

I discussed the coming agreement with many experts in the field of nuclear science. And each happened to throw light on some new, occasionally quite unexpected facet. This added to my conviction; the expediency of selling military uranium must be discussed not only in ministerial offices, but also by producers, ecologists, analysts from foreign intelligence—the broadest range of people.

From a talk with Gennady Kondobayev, people's deputy of Russia, member of the Supreme Soviet's Committee on Industry and Power Engineering: "In December Bush plans to visit Russia. And, I believe, most likely he will sign the agreement on weapon uranium with Yeltsin.

"I am afraid that his advisers will tell him: everything is just fine, very soon we shall disarm ourselves and get currency into the bank. And they will hush up the fact that our most advanced technologies will suffer."

Intelligence Out of Work

I received phone calls from several people who told me the same story: a protocol had been signed on the construction as a "turn-key" project in China of a separating plant equipped with the most up-to-date technology. For 30 years we have been polishing it, keeping it as the most carefully guarded secret. And now...

"A normal commercial transaction," my emotions were cooled by Yevgeny Mikerin. "Indeed, the equipment is of the latest serially-produced type, but we will not transfer the technology of its manufacture. And in the contract we shall necessarily stipulate a ban on its multiplication as well as re-export."

But I remain convinced: it is practically impossible to check how our technology is used in China, where even the inspectors of the International Atomic Energy Agency are not admitted to military facilities. Moreover, centrifugal machines can be used to obtain uranium for

making nuclear weapons. And China is still not a party to the international treaty on the non-proliferation of the latter.

The question is not that we may cut off the existing and likely uranium markets from ourselves...

Russian Reaction to NATO Arms Proposals Cited

MK2611155592 Moscow KOMMERSANT-DAILY in Russian 26 Nov 92 p 9

[Report by Anastasiya Romashkevich: "New NATO Disarmament Proposals: Icelandic Set of Proposals Discussed"]

[Text] Discussion of Iceland's proposals on weapons nonproliferation began today in Vienna during the talks within the CSCE framework. The Russians are studying the document and have so far refrained from making detailed comments.

Iceland submitted the package of documents on mass-destruction weapons and conventional arms nonproliferation last Thursday. It was stipulated that the proposals came from a "group of states," although it was not said which states precisely. Clearly, however, Iceland, as a NATO member, consulted its alliance partners. The set of documents contains proposals on limiting conventional, nuclear, chemical, and bacteriological weapons proliferation. Iceland, in particular, asks the conference participant states to present the United Nations by April 1993 with information pertaining to arms exports and imports and display restraint in supplying weapons to conflict zones, and also recommends that they subscribe to international documents regulating the proliferation of arms and military technologies and take part in international seminars dealing with these problems. What is more, the proposals make provision for the qualitative intensification of information exchange between the states in the sphere of the arms trade.

Your KOMMERSANT-DAILY correspondent was told by Andrey Vorobyev, first secretary of the Russian Foreign Ministry Department for Disarmament and Control of Military Technologies, that the Foreign Ministry and Defense Ministry are currently studying and working on this document. According to Vorobyev, the Russian side regards Iceland's new proposals as "skillful and competent" and consonant with Russia's position. However, he did not rule out the possibility of Russia's submitting some addenda.

According to information received from the Foreign Ministry, the Russian delegation at the conference led by Vladimir Shustov, ambassador extraordinary and plenipotentiary, will not voice an opinion on this issue in the immediate future. This will only take place once it has examined the documents, tentatively speaking in December.

Mr. Vorobyev also said that at this moment the Russian delegation is working in three other areas: It is working

on proposals to "harmonize the process of information exchange" as well as on a code of military conduct and on questions of military planning that the Netherlands submitted on behalf of NATO countries late last month for the conference to examine.

Russia To Supply Enriched Uranium to Japan

*LD2411124292 Moscow ITAR-TASS World Service
in Russian 1115 GMT 24 Nov 92*

[By ITAR-TASS correspondent Vyacheslav Bantin]

[Text] Tokyo, 24 Nov—During the Russian-Japanese consultations on problems of bilateral cooperation in atomic energy that began in Tokyo today, the Russian side is striving to establish a route for Russian enriched uranium on to the Japanese market. "We are proposing that Japanese companies build a depot for the storage of enriched uranium supplied from Russia," Vitaliy Konovalov, head of the delegation from the Russian Ministry for Atomic Energy and first deputy minister, said in an interview with an ITAR-TASS correspondent. In his view, this will make it possible to guarantee Japanese companies uninterrupted supplies of uranium, and it will give Moscow the opportunity to obtain significant credits.

The first deputy minister of atomic energy noted that Russia possesses stocks of enriched uranium that could fully meet all Japanese atomic power stations' requirements for this nuclear fuel. "Moreover, our technology is cheaper than, say, American technology, and we can sell enriched uranium at lower prices than those on the world market," noted Vitaliy Konovalov. He said that experimental samples of Russian enriched uranium have already been sent to a number of Japanese atomic power stations for their experts to try out this product in practice.

A wide range of issues of bilateral cooperation in the sphere of nuclear power engineering is to be discussed during the present Russo-Japanese consultations. For example, specific details of the project according to which Japan is to reconstruct a training center at Novovoronezhskaya nuclear electric power station [AES], designed to improve actions of the staff of nuclear power stations in emergency situations, are to be examined. An exchange of opinions is to take place with regard to Tokyo's plans to render assistance to Russia in carrying out early forecasts at AES's. The Russian side is to offer a number of other cooperation projects, including those on using Russian technology for water desalination, which have been successfully used in Kazakhstan for many years. Cooperation between both countries in environment protection and joint efforts in processing and burying AES waste are also to be discussed at the consultations.

Answering a question from an ITAR-TASS correspondent, a spokesman for the Japanese Ministry of Foreign Affairs said at today's briefing that he believes the current consultations are "a positive factor in bilateral

relations." "We intend to promote our cooperation with Russia in the sphere of nuclear power engineering and in ensuring the safety of Russian AES's," he noted.

Russian Leader Urges Revising Treaty With DPRK

*LD2011102492 Moscow ITAR-TASS in English
1015 GMT 20 Nov 92*

[By ITAR-TASS correspondents Vasilii Golovnin, Ivan Zakharchenko, Vladimir Kuchko, and Yuriy Sizov]

[Text] Seoul November 20 TASS—Russian President Boris Yeltsin believes the treaty with North Korea "needs to be either cancelled completely or drastically revised".

At a press conference in Seoul on Friday he reminded that the first article of the treaty of 1961 envisages that Russia, as an inheritor to the former USSR, "must render immediate military assistance if North Korea wages a war".

"We do not intend to render such military assistance", the president said, adding the article is to be cancelled.

Russian refusal to provide any help to North Korea in nuclear technologies will "freeze" nuclear research of Pyongyang thus ensuring nuclear stability on the Korean Peninsula, according to the president. Without such help North Korea will be unable to develop its own nuclear potential, he added.

"We believe that the future democratic reunification of Korea is possible only along the path of nuclear-free development", Yeltsin stressed.

Russian Officials Say DPRK Seeking Nuclear Aid

*OW2511123992 Tokyo KYODO in English
1210 GMT 25 Nov 92*

[Text] Tokyo, Nov. 25 KYODO—North Korea has requested Russia to resume suspended assistance for its nuclear power program, Russian Government nuclear experts were quoted as saying here Wednesday.

Foreign Ministry officials said officials of Russia's Foreign Ministry, the Ministry of Atomic Energy, and the State Committee for the Supervision of Nuclear and Radiation Safety, made the revelation in bilateral talks here on nuclear issues, which began Tuesday [24 November] and are scheduled to last through Friday.

The Russian officials were quoted as saying Pyongyang wants cooperation resumed with regard to four nuclear plants for electricity generation that were previously under construction with Soviet assistance.

The former Soviet Union suspended cooperation in 1985 in connection with North Korea's previous reluctance to accept inspections of its nuclear facilities by the International Atomic Energy Agency (IAEA).

Japanese officials noted that the IAEA had previously only reported that three nuclear plants were under construction with Russian help.

Pyongyang is also said to have called for Russian cooperation in uranium mining and for the training of nuclear energy specialists.

They reportedly said Russia would want to ensure that there are safeguards in place so that know-how and technology transferred to Pyongyang would not be put to military use.

Another factor would be whether the proposals would have economic merit for Russia, they said.

Officials said both the Japanese and Russian delegations expressed a desire to see North Korea dispel international concerns about its nuclear program by implementing an agreement with South Korea providing for mutual inspections of nuclear facilities.

Officials from Japan's Foreign Ministry, the Ministry of International Trade and Industry (MITI), and the Science and Technology Agency participated in the talks with the Russians on the production and harnessing of nuclear energy.

The Russians also revealed plans to build a nuclear power plant in the Russia far east region, probably in the vicinity of Khabarovsk, officials said.

The Japanese and Russians also discussed the promotion of further Japanese assistance to Russia for enhancement of safety measures at nuclear facilities.

At the last such meeting in Moscow in October 1991, Japan offered to invite 1,000 Russian nuclear plant operators to Japan over a 10-year period for training in areas of Japanese expertise, such as safety.

Russia Offered Nuclear Cooperation by DPRK

*LD2711104492 Moscow ITAR-TASS in English
0839 GMT 27 Nov 92*

[By ITAR-TASS correspondent Vyacheslav Bantin]

[Text] Tokyo November 27 TASS—"North Korea recently offered Russia to resume cooperation in nuclear engineering, suspended in the second half of the eighties," ITAR-TASS was told by Russian First Deputy Minister for Nuclear Energetics Vitaliy Kononov, who is currently visiting Tokyo. He said Moscow believed this was in principle possible.

"To resume such cooperation with the Korean People's Democratic Republic," Kononov stated, "it is necessary to observe two preconditions—it must yield commercial benefit to Russia, and Pyongyang must scrupulously observe all the rules and standards of the

International Atomic Energy Agency. If such cooperation is resumed, it will include Russia's participation in the construction of several atomic power plants in North Korea.

Russian Nuclear Power Specialists Arrive in Japan

*LD2511172592 Moscow ITAR-TASS in English
0736 GMT 16 Nov 92*

[By ITAR-TASS correspondent Andrey Varlamov]

[Text] Tokyo November 16 TASS—A delegation of experts from the Russian Ministry of Nuclear Power Engineering arrived in Japan on Sunday. They will discuss with Japanese specialists the problem of improving the safety of the Russian nuclear power plants, fitted with reactors of the Chernobyl type. The problem is extremely important not only for Russia, but also for the world in general.

The Russian experts were invited by the Japanese Research and Technological Department within the framework of the programme, announced at the conference of the G7 countries in Munich, which is aimed at promoting the improvement of safety of the nuclear power plants in the former USSR and East European countries.

During the visit the Japanese specialists intend to show the Russian delegation a rather simple and original system of early emergency warning, created by the Local Agency for the Development of Nuclear Reactors and Fuel. It is functioning effectively at several Japanese nuclear power plants. The system is based at the processing of computer information on the acoustic situation in the reactors' cooling system, which comes through the highly sensitive microphone installed directly in it. They register any changes in the continuous flow of the cooling liquid.

Russia Rejects Japanese Aid in Dismantling N-Arms

*LD2711105992 Moscow ITAR-TASS in English
0905 GMT 27 Nov 92*

[By ITAR-TASS correspondent Vyacheslav Bantin]

[Text] Tokyo November 27 TASS—"Russia needs no Japanese aid to dismantle the nuclear weapons of the former USSR," ITAR-TASS was told by Russian First Deputy Minister for Nuclear Energetics Vitaliy Kononov, who led a Russian delegation to the Russo-Japanese consultations on cooperation in nuclear engineering, which ended in Tokyo today.

During the four-day consultations in Tokyo, the Japanese side moved to set up an international mechanism for controlling the use of plutonium obtained from dismantled nuclear weapons of the former USSR. In light of this, the deputy minister noted that this was an

attempt to "kick the ball into one goalmouth". "A similar disarmament process is under way in the United States, but everybody wants to control only Russia," Konovalov said.

"The main attention during the Russo-Japanese consultations," Konovalov noted, "was devoted to cooperation in ensuring the safety of nuclear power plants built in Soviet times. For instance, final agreement was reached on Japanese delivery of equipment for a scientific centre, which is to be set up at the Novovoronezhskaya nuclear power plant. It will train safety personnel for nuclear power plants in Russia and other CIS Republics. It is planned to sign an official agreement before February 1993, according to which Japanese specialists will carry out assembly jobs at the centre in the period from mid-1993 to mid-1995. Tokyo has also expressed readiness to annually host 100 specialists from nuclear power plants in Russia and other CIS Republics. They will receive upgrading at Japanese companies.

Russia Plans Sale of Uranium on Japanese Market

*LD2611200692 Moscow RIA in English
1610 GMT 26 Nov 92*

[Text] Tokyo, RIA—Russia hopes eventually to appear on the US-monopolized Japanese market of conventional Uranium—a well-grounded hope, with top-class Russian technologies and considerable Uranium deposits. Japanese nuclear power stations will have a reliable supplier. Though Russian Uranium exports to Japan have not yet come under discussion, the intention is no secret for the tentative importer. RIA has this information from an interview with Vitaliy Konovalov, deputy-minister for nuclear energy, who leads the Russian delegation at bilateral nuclear power consultations, underway in Tokyo. The conferees are discussing technical issues of probable Japanese assistance in the updating effort on the Voronezh nuclear station training centre, and supplies to Russia of reactor testing equipment. Japan is willing to allocate US\$25 mln to both programmes, and welcomes several dozen Russian nuclear station experts a year for training.

Russia Believed Source of 'Red Mercury' in CSFR

*93WP0038A Moscow NEZAVISIMAYA GAZETA
in Russian 25 Nov 92 p 1*

[Article by Aleksandr Kuranov: "Just as Before, Nuclear Components Are Going Cheap in Russia: Prague Journalist Brings Test Tube Containing 'Red Mercury' Out of Russia"]

[Text] After several unsuccessful attempts by the police, army, and security organs of the CSFR [Czech and Slovak Federal Republic] to track the transshipment from Russia through Central Europe to the Middle East and Africa of the so-called "red mercury"—one of the components of nuclear weapons—this task was undertaken by several Czechoslovak journalists. The greatest success was achieved by

Martin Mrinka, a reporter for the Prague newspaper PROSTOR, who demonstrated his achievement on a television news program Monday night; it was a test tube containing "red mercury" in its powder form.

The journalist had purchased samples of this item supposedly for a Czech firm for 560 dollars in Vladivostok. According to him, 1 kg of "red mercury" on the "black market" in Russia costs from 5,000 to 70,000 dollars, depending on its type and documentary certification. In the CSFR its price goes up to as much as 250,000 dollars, and in Great Britain—for example—according to information provided by the SUNDAY TIMES, half a kilo of "red mercury" sells for 1 million pounds sterling.

The chemical formula for this new "souvenir from Russia" is $\text{Hg}_2\text{Sb}_2\text{O}_7$. According to data provided by the British physicist Barnaby, as cited by the reporter from PROSTOR, this material is used for producing small nuclear charges in Iraq, Iran, Algeria, Israel, and Libya. Beran, an expert at the Institute for Nuclear Research Studies in the CSFR, has proposed using "red mercury" in infrared military lasers.

This item is offered on the "black market" in the following two variants: as a brownish-steel-colored powder and as a red liquid. According to Mrinka's information, the mercury is produced at the well-known Krasnoyarsk-25 Plant, which turns out the classic nuclear bombs. As a non-radioactive substance with a somewhat different formula, it is now being brought into Prague; it is also made in limited quantities at several scientific research institutes, particularly in Novosibirsk. In its liquid form mercury is offered for sale primarily in the Pacific maritime cities of Vladivostok, Petropavlovsk-Kamchatskiy, and Nakhodka, where it is possible to obtain it from sailors off of nuclear-powered submarines.

According to the data provided by Martin Mrinka, "red mercury" travels from Krasnoyarsk-25 and Novosibirsk along two principal routes: Yekaterinburg-Moscow-Prague (or Warsaw)-Vienna (or some German cities)—to destinations in the Middle East, Africa, or Latin America.

Another route is as follows: through Vladivostok to China—North Korea—the Persian Gulf—Ethiopia—South Africa. In Vladivostok the Prague journalist found the tracks left by his fellow-countrymen, who had participated in a similar deal this past spring.

Russian-Iranian Nuclear Cooperation Protocol Signed

*PM2511153292 London AL-HAYAH in Arabic
25 Nov 92 pp 1, 4*

[Unattributed report: "Russian Official Reveals Nuclear Cooperation Agreement with Iran to AL-HAYAH"]

[Excerpt] Moscow, AL-HAYAH—An official in the Russian Nuclear Energy Commission yesterday revealed that Moscow and Tehran signed a nuclear cooperation

protocol after a secret visit to Moscow by the Iranian Nuclear Energy Commission's chairman two weeks ago.

The official told AL-HAYAH that the protocol provides for Russian participation in the construction of a nuclear electric plant, which will cost \$880 million, and a nuclear research reactor, and for the training of Iranian researchers in Moscow. [passage omitted]

Russian Export Control Measures Eyed by Cocom

*PM2611134592 Moscow IZVESTIYA in Russian
26 Nov 92 Morning Edition p 5*

[Report by Yuriy Kovalenko: "Ex-USSR Republics Take Part in Cocom Session for First Time"]

[Text] A two-day Cocom—the Coordinating Committee to control exports of strategic goods to the socialist countries set up during the "cold war"—cooperation forum ended Tuesday in Paris. For the first time ever Russia and the other republics of the former USSR and also the East European countries took part in the session.

Although the socialist camp had vanished, until recently Cocom continued as though nothing had happened to oversee the implementation of restrictions on the sale of listed advanced technology. The Cocom members—all members of NATO except for Iceland, plus Japan and Australia—would occasionally revise the "blacklists" of hundreds of items. To this day it is a criminal act to violate Cocom bans. But at long last the winds of change have reached this organization.

"The participants in the forum," Russian Deputy Foreign Minister Grigoriy Berdennikov said in conversation with journalists, "reached the conclusion that there are no longer any political reasons for Cocom to continue discriminatory practices in the sphere of trade and economic cooperation. Both the Europeans and the Americans are unanimous that there is a need to reform the present system. At the same time," the deputy minister admitted, "there are some restrictions that cannot be eliminated because of the requirements of the nonproliferation of nuclear weapons, missiles, and missile technology."

"We briefed the Cocom members," G. Berdennikov noted, "on the export control system created in Russia, which is aimed at preventing the proliferation of weapons of mass destruction and delivery systems. We intend to act in such a way that Russia is in no case a source of their proliferation."

To this end Moscow has set up its own internal "Cocom"—Russia's Eksportkontrol [Export Control Agency], which includes deputy ministers of foreign affairs, economy, foreign economic relations, science, defense, and security....

Russian Plan To Store Nuclear Waste Viewed

*93P50023B Moscow KOMMERSANT-DAILY
in Russian 24 Nov 92 p 8*

[V.M. report: "The Supreme Soviet on the Return of Nuclear Wastes: Atomic Stations' Wastes Will Be Buried in Russia"]

[Text] Yesterday the Russian Supreme Soviet Committee on Industry and Energy and the Committee on Questions of Ecology and the Rational Use of Natural Resources considered a draft presidential edict dealing with the problem of bringing back to Russia the spent fuel of foreign countries' atomic electric stations, including those of the former republics of the USSR.

The government prepared the draft edict upon the representation of the Ministry of Atomic Energy and after agreement with the Ministry of Environmental Protection and with the State Committee for the Supervision of Nuclear and Radiation Safety [Gosatomnadzor]. The draft edict in fact contradicts the Law on Environmental Protection, adopted in February of this year, although the president's extraordinary powers permit this step. In the opinion of experts, refusal to accept the wastes of atomic electric stations could lead to unpredictable consequences. The majority of countries with such stations lack the technical capability to guarantee the storage of nuclear wastes. And in this sense the Law on Environmental Protection became "more Catholic than the Pope," permitting the construction of thermal electric stations only if they used ecologically clean fuel, which does not exist in nature. It is proposed that the presidential edict, if it is adopted, will stand next to the Law on State Policy on Dealing With Radioactive Wastes, now being prepared in parliament. New information on the legislative regulation of the storage of atomic wastes will appear in KOMMERSANT no later than 30 November.

Russia Investigating Detonations at Novaya Zemlya

*93WP0020A Oslo AFTENPOSTEN in Norwegian
27 Oct 92 p 2*

[Article by Halvor Tjonn and Ole Mathismoen: "Discussion of Nuclear Detonations up North"]

[Text] *Moscow confirms investigating the possibility of detonations of old weapons on Novaya Zemlya.*

However, at the same time, both the Russian Foreign Ministry and the Nuclear Energy Ministry reject the idea that there are any firm plans to destroy chemical weapons or nuclear warheads by detonating them on Novaya Zemlya.

AFTENPOSTEN wrote on Friday [23 October] that the Russians had drawn up plans to utilize the Northern archipelago as a large-scale destruction area for illegal chemical weapons and old nuclear weapons. One of the sources was Alexandr K. Chernychev, Deputy Director

at the closed nuclear city Arzamas-16, the scientific center in Russia's nuclear complex.

Norwegian Opposition

According to Parliamentary Secretary Helga Hernes at the Foreign Ministry, the Norwegian Embassy in Moscow has been informed that the plans are being considered in theory and that the project is far from being executed: "Russian authorities have assured us that the international community will be consulted before the plans would be carried out. We want to convey to Russian authorities our emphatic opposition to these plans and our view that so-called peaceful nuclear detonations also are a violation of the test ban moratorium," Hernes says. The Foreign Ministry has contacted U.S. authorities who are of the same opinion. Hernes adds that Norway will now intensify its efforts to find alternate ways of destroying old chemical and nuclear weapons.

"It is first and foremost the economic aspect that causes Russian authorities to evaluate alternatives to manual destruction," Hernes says.

Possible Destruction

Sources in Moscow have informed AFTENPOSTEN that the Russians in fact are investigating the possibility of destroying both chemical weapons and nuclear weapons in underground shafts at Novaya Zemlya. The weapons will possibly be destroyed by nuclear detonation 500-600 meters below ground. "However, this procedure is only a theoretical possibility. Even though one might decide to destroy nuclear and chemical weapons in this manner, nothing will happen until some time in the distant future," AFTENPOSTEN was informed.

There is some difference of opinion among Russian authorities in this matter. In the Foreign Ministry one firmly rejects the fact that there might be a current policy of starting such a project at Novaya Zemlya. Sources within the Ministry of Nuclear Energy, on the other hand, says that so-called peaceful nuclear detonations might be considered. However, that is only one of several ways being considered for disposal of weapons that have become illegal during the last few years because of disarmament agreements. Whether this will ever become reality is all up in the air, it is emphasized.

Ongoing Investigation

At present the question is being looked into. Should one arrive at the conclusion that it is practical to destroy illegal weapons at Novaya Zemlya, one will have to go through a political process. There is no doubt but that this will take some time.

Nobody in Moscow is hiding the fact that this question is being discussed. Many people in the Ministry of Nuclear Energy know about the problem and are willing to put forth their opinions. It is, however, difficult to say for sure whether the opinions expressed to the press are in

accord with reality. In Russia, and not least in the northern areas of Russia, the plans to destroy illegal weapons below the mountains of Novaya Zemlya will lead to considerable political resistance if they are about to be realized.

Russia's Grachev Denies Plans for Plutonium Sales

OW2911162692 Moscow INTERFAX in English
1611 GMT 29 Nov 92

[Transmitted via KYODO]

[Text] The weapons grade plutonium banned for exports under international agreements cannot be used for peaceful purposes, Russian defence minister Pavel Grachev told IF [INTERFAX]. He described political speculations about a possible sale of plutonium contained in Russia's nuclear weapons subject to elimination as amateurish conjectures. The minister said such statements could come either from totally ignorant people or selfish politicians seeking to thwart the transfer of the ex-Soviet Union's nuclear weapons under Russian jurisdiction.

General Grachev quoted as "a good example" the way in which Russia and Belarus were trying to sort out the issue. The minister said he and his Belarusian counterpart had agreed that the nuclear weapons deployed in Belarus could be transferred to Russia within months instead of five years as envisaged by the bilateral agreement.

He spoke of Russian servicemen being in charge and control of all nuclear weapons facilities in Belarus and Kazakhstan close to opt for a similar arrangement. [sentence as received] Ukraine which still wants its own jurisdiction over nuclear weapons deployed on its territory, he said, has agreed for Russia's control though under the CIS flag.

Russia Predicts Shortage of Nuclear Sub Specialists

LD2611144692 Moscow ITAR-TASS in English
1244 GMT 26 Nov 92

[By ITAR-TASS correspondent Roman Zadunaiskiy]

[Text] Moscow November 26 TASS—The Russian Northern and Pacific nuclear submarine fleets will lack 15-20 per cent of specialists in nuclear reactors and missile launch operators after Ukraine has taken over the only two higher schools training such officers.

133 graduates of the schools situated in Sevastapol were tempted over by the Ukrainian Defence Ministry this year, according to Head of the Russian Navy Personnel Department Evgeniy Yermakov.

Years will be necessary for Russia to create its own schools training the specialists and, in the meantime, it can count only on 270 next year graduates out of a total of 720.

Yermakov said Ukraine does not need the specialists as it has no jobs to offer them and most of those converted

had to change their profession. Those who refuse to obey are often threatened that they might lose Ukrainian citizenship, he added.

143 out of 825 freshmen were transferred from Ukraine to various Russian military schools this year. More could have been converted had it not been for the obstacles erected by the Ukrainian Defence Ministry, Yermakov said, adding that Ukraine charges Russian military authorities 520 roubles in annual education fees for each student.

Ukraine Denies Creating 'Own Codes' for N-Arms

OW2511175592 Moscow INTERFAX in English
1651 GMT 25 Nov 92

[Transmitted via KYODO]

[Text] A Foreign Ministry official in Kiev speaking at the end of a visit to Ukraine by U.S. Senators Sam Nunn and Richard Lugar spoke of understanding being reached with the U.S. on the elimination of nuclear weapons deployed in the republic. Konstantin Grishenko said the question of compensation for enriched uranium contained in the warheads was also discussed.

The spokesman maintained that there was a 20-year draft agreement between the U.S. and Russia under which the uranium from the warheads of long-range missiles would be sold to the American side. That is why, said Grishenko, Washington believes that the transfer of warheads to Russia would be the best option, with Kiev receiving substantial compensation for the uranium.

In the meantime, the Ukrainian deputy defence minister, Ivan Bezhan, said that Kiev was honouring its obligations under the START Treaty within the CIS framework. Speaking at an impromptu round table discussion on national radio, he denied allegations that Ukraine was creating its own codes for nuclear weapons deployed in the republic.

Bezhan spelled out support for ratifying the START Treaty, though calling for political factors to be taken into account in the reduction of nuclear weapons. In his view, the long-range missiles can be transferred outside the republic for an immediate destruction but not storage. Bezhan also believes that both the boosters and warheads must be destroyed simultaneously.

For his part, General Vladimir Strelnikov, who is in charge of the military university in Kharkov, was critical of the western position on nuclear disarmament. He said that while the western states were applying pressure on Ukraine within the framework of NATO and CSCE, they failed to do the same in respect of Britain and France whose nuclear stockpile was almost equal to that of Ukraine.

Kazakhstan, UK Reach Nonproliferation Accord

93P50023A Moscow KOMMERSANT-DAILY
in Russian 24 Nov 92 p 8

[Report by Aleksandr Epikhodov: "Problems of Nuclear Weapons in the CIS: Agreement Signed Between Kazakhstan and Great Britain"]

[Text] On Saturday 20 November, Kazakhstan's Vice President Erik Asanbayev completed his visit to London. In the course of the visit an agreement between Kazakhstan and Great Britain, on joint action in limiting the arms race and taking measures to prevent the proliferation of technology usable for military purposes, was signed.

The British Government distributed a statement on the results of the Kazakh vice president's visit, in which it welcomed the republic's commitment to join the 1968 Nuclear Nonproliferation Treaty. In the statement it is noted that both countries recognize the importance of preventing the proliferation of all types of weapons and preserving controls on exports of technologies which can be used to produce weapons. Great Britain and Kazakhstan, like other Western states, express concern at the fact that nuclear and other weapons might appear in unstable Third World countries. In the statement it is emphasized that both sides expect a rapid beginning and successful conclusion of talks between Kazakhstan and the European Community, with the goal of concluding an agreement on cooperation and partnership.

Observers note that in recent times Kazakhstan has, without any preconditions, constructively carried out the policy of turning the republic into a nuclear-free zone. President Nursultan Nazarbayev's declaration, at his meeting with a U.S. Congressional delegation on 21 November, that Kazakhstan will quickly join the Nuclear Nonproliferation Treaty, is a confirmation of this.

Armenia Urged To Reopen Nuclear Power Plant

OW2211135292 Moscow INTERFAX in English
1300 GMT 22 Nov 92

[Transmitted via KYODO]

[Text] It is necessary for the Armenian nuclear-power plant situated in a suburb of Yerevan to resume its work after its reconstruction and the introduction of extra safety measures, the plant's director Samvel Vardanyan told the Armenian newspaper "Erkir". The restoration of its nuclear-power plant will cost Armenia one half of the funds needed to buy fuel.

The nuclear-power plant near Yerevan was shut down under public pressure in 1989.

Azerbaijan Foreign Minister Denies N-Arms Report

*NC2011194992 Baku AZERINFORM in Azeri
1522 GMT 20 Nov 92*

[Text] Baku, 20 Nov (AZERINFORM)—Azerbaijani Foreign Minister Tofik Gasymov has categorically denied a CBS television report on the presence of nuclear weapons on the territory of Azerbaijan. Azerbaijan has allegedly threatened to use these weapons against Armenia in connection with the "bloody conflict in mountainous Karabakh."

Describing this report as a total lie, the foreign minister stated officially that no nuclear weapons exist on the territory of Azerbaijan and the nuclear tipped rockets belonging to the former Soviet Armed Forces were taken out of Azerbaijan in 1989.

The minister also noted that Azerbaijan has joined the international nuclear nonproliferation treaty and has proposed to include the republic in a nonnuclear zone.

FRANCE

Mitterrand Denies Aiding Iraqi Nuclear Program*LD2211114892 Paris France-Inter Radio Network
in French 1100 GMT 22 Nov 92*

[Text] [French President] Francois Mitterrand, who is due to go to Israel on Wednesday for an official visit, said he is deeply hurt by accusations that France gave Iraq military aid before the Gulf war. Francois Mitterrand, who was being interviewed by Israeli television, denied the allegations, according to which France is reported to have helped improve the range of the Iraqi skud missiles which were fired against Israel and Saudi Arabia during the war. The president, who is to pay a four-day visit to the Jewish state, said these criticisms are very unfair, biased, and sectarian. He also denied having helped Iraq improve its nuclear program.

Concerning the peace negotiations in the Middle East, the head of state stressed that real peace in the region cannot be achieved as long as there is no recognition of the existence of the Palestinians on a land that remains to be defined.

GERMANY

Man Arrested Trying To Sell Weapons-Grade Uranium*AU2611183992 Paris AFP in English
1807 GMT 26 Nov 92*

[Text] Munich, Germany, Nov 26 (AFP)—Bavarian police said Thursday they had arrested a Romanian-born man and seized a quantity of weapons-grade uranium in a new case involving radioactive materials smuggled from the former Soviet bloc.

The man, a German national identified only as Michael S., 29, was arrested on a train on October 9, carrying in his pocket 21 tablets of highly-enriched uranium, weighing 307 grammes (10 ounces) and wrapped only in paper, a spokesman said.

The uranium is enriched enough to be useable in atomic weapons and probably came from a pressurised-water "Candu"-type reactor at Cernavoda in Romania, the spokesman said.

Michael S., who was seized by a specially equipped police unit, was trying to sell the tablets for 20,000 marks (12,500 dollars), he said.

He was suspected of acting as a courier for a group of Romanian-born Germans, under police surveillance for several months, who have been trying to sell four kilos (8.8 pounds) of uranium for 800,000 marks (half a million dollars), he said.

Since the start of the year, German police have recorded 100 cases of smuggling of radioactive materials, brought into the country from the former Soviet Union and its allies.

Virtually all the cases have comprises low-grade, relatively harmless substances.

But on November 2, a British citizen, named as Norman Derbyshire, was arrested in the northern city of Flensburg on suspicion of trying to sell capsules of plutonium to Iraq.

Kinkel Supports Moscow Nuclear Science Center*LD2811164792 Berlin ADN in German
1135 GMT 28 Nov 92*

[Text] Bonn (ADN)—Federal Foreign Minister Klaus Kinkel (Free Democratic Party [FDP]) has warned that former Soviet nuclear experts could develop into nuclear mercenaries. With the establishment of the International Science and Technology Center (ISTC) Moscow, Kinkel says, an effective step has now been taken to avert the threat to world peace. The center offers work and research prospects in the civilian sector to the scientists, Kinkel said in Bonn today.

The agreement on the establishment of the center, which was signed in Moscow by representatives of the EC, the United States, Russia, and Japan had been achieved also through German efforts, Kinkel said. However, the danger of proliferation of weapons of mass destruction has not been averted. Further worldwide efforts for disarmament and nonproliferation are needed.

According to the Foreign Ministry, the ISTC will "offer scientists and engineers who possess knowledge about the production of nuclear weapons and other weapons of mass destruction incentives to use their skills in their own country for peaceful purposes." The EC has promised 20 million ECU's, the United States \$20 million, and Japan \$17 million to finance the institute. Russia will contribute material goods. Sweden, Switzerland, and Canada have already expressed their intention to join the center. Efforts are also being made to cooperate with international and nonstate organizations, foundations, and the private sector.

NORWAY

Technology Transfer to Pakistan Results in Fine*93WP0018A Oslo AFTENPOSTEN in Norwegian
20 Oct 92 p 2*

[Article by May Britt Broyn: "Defendants Bargained Themselves Into Fines: Sold Data Equipment to Pakistan"]

[Text] *The prosecuting attorneys have sounded a full retreat in the first criminal case after the new export control law.*

After intense negotiations between the prosecution and defense in the late evening hours, a serious charge concerning illegal export of high technology evaporated, so to speak: The case was settled with the option of a fine in lieu of prosecution.

Yesterday, a 51-year-old businessman from Asker and a 50-year-old former trusted employee of Norsk Data were supposed to have had an appointment in the Asker and Baerum lower court, charged under the export control law of 1987 of illegally having exported several advanced data machines to Pakistan. One of the initial police theories was that the equipment was intended for use in the production of advanced weapons.

The initiative for the unorthodox solution came directly from criminal chief Wenche Flavik and prosecuting attorney Harald Stranda, who had prepared the indictment. The negotiations extended over several evening hours last Monday. The two accused sat there together with their attorneys, Kjell Dagestad and Erling O. Lyngtveit. Flavik and Strand both took part in the negotiations, each via his own telephone line.

Intentional violation of the existing statutory provision about giving incorrect information when exporting technology has a penalty of five years in prison. But, at 1100, the prosecuting attorneys beat a full retreat and the case has ended up with two fines of 60,000 kroner.

Two weeks had been reserved for the case, which now are unnecessary. More than 20 Norwegian and foreign experts had been called in as witnesses.

"We were well prepared to go to court and this move therefore came as a big surprise. For my client, the fact that he accepted the option of a fine does not mean any acknowledgement of criminal responsibility. But, despite everything, it was a break for him to avoid a more than two-week trial. We also reached a much better agreement than the prosecuting attorneys first offered us," says Kjell Dagestad, the attorney who is defending the 51-year-old from Asker.

Both of the accused agreed to the option of fines last week. In addition, the Asker man agreed to state confiscation of 100,000 kroner because, according to the charge, he had realized a personal gain from dealing in the data machines.

The two will not have to pay, however: The fines are considered already paid because the two spent three to four weeks in preventive custody after they were arrested. And the Asker man, who accepted confiscation, is now getting 500,000 kroner back from the state treasury—because the police had seized 600,000 kroner in connection with the arrest.

Both the Foreign Ministry, the Security Service, as well as Customs Service had completed several months of secret investigation when they struck against the last data equipment shipment last summer. With the cooperation of British customs authorities, the equipment was stopped in London and the two implicated Norwegians arrested.

In 1987, Norsk Data itself exported 15 comparable NOR 5400 computers to Pakistan with an export license from the Foreign Ministry, but halted the sale when they were

refused permission to inspect the machines. It has long been known that Pakistan is working on developing nuclear weapons and there was a fear in the Foreign Ministry that the machines could be used for this purpose.

"There continues to be much that indicates that the machines the two were accused of having exported were supposed to go, via middlemen, to the same recipient as at that time. The police reacted forcefully and this case would have been a test of how the export control law of 1987 can be applied. But the prosecuting attorneys apparently have had problems with bringing this case before the court," says Dagestad.

The Foreign Ministry information chief, Arthur B. Knutsen, advises that there is now a general prohibition against exporting data technology to Pakistan, but that both the end users and the purpose of the machines will be of decisive importance when an export application is to be evaluated.

"Moreover, no one in the Foreign Ministry will comment at all on this current case," he says.

UNITED KINGDOM

Rifkind To Rebuff Yeltsin on New N-Arms Talks

PM0911130392 London THE DAILY TELEGRAPH
in English 7 Nov 92 p 4

[Report by Peter Almond: "Rifkind To Stand Firm on Nuclear Arms Talks"]

[Text] Mr Rifkind, Defence Secretary, is expected to rebuff sharply any Russian attempts to include Britain in new nuclear arms talks when Mr Yeltsin, the Russian President, arrives in London today.

Indications that the subject is high on the Russian agenda are seen in the arrival with Mr Yeltsin of Gen Pavel Grachev, his youthful defence minister; in increasing Russian objections to the new Start 2 nuclear arms cuts; and by Russian officials who pointed to a hiatus of several months as President-elect Clinton establishes his administration in Washington.

Mr Boris Ivanov, of the disarmament Department of the Russian Ministry of Foreign Affairs, said: "This is a good chance to fill in the vacuum, to fill in issues on arms policy and bring in other countries, such as the United Kingdom.

Mr Major and Rifkind, however, are expected to tell the Russians that Britain's Trident nuclear force is non-negotiable, although British officials concede that the Start 2 talks, which envisage cuts to 2,500 or 3,000 strategic nuclear warheads in both Russia and America, make the 400 or more British warheads statistically more relevant.

More important to Britain is the opportunity to question the Russian leaders about the growing strength of Russian military opposition to Mr Yeltsin's economic plans.

Western officials are also concerned by Mr Yeltsin's decision to stop the movement of Russian troops out of the Baltic states because of a shortage of housing for them; and by his failure to reveal one of Russia's biological warfare programme until the West told him.

American officials said there is growing military resistance to the Start 2 cuts, to the point that the Ukraine is reconsidering giving up the ballistic nuclear missiles on its territory. There is also concern that the reorganization of Russia's forces has left confusion and a lack of direction.

"We still do not have a definition of exactly what are our strategic forces," admitted Mr Ivanov at a symposium on UK-Russian defence cooperation in London last week. "Yes, there is a certain confusion on some of the issues. There are some grounds for you to be worried."

Mr Ian Bond, head of NATO section at the security policy department at the Foreign Office, said there was concern about the reliability of military officers at the centre of the Russian government, and about "leakages" of weapons to other groups and other countries.

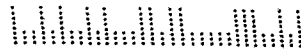
But Britain believes it is essential to help Mr Yeltsin's reforms because the alternatives—disintegration or an expansionist or chauvinist regime—would be worse.

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